NOTES

ON

JERDON'S MAMMALS OF INDIA

BY

AN INDIAN SPORTSMAN

AND LOVER OF NATURAL HISTORY.

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DEDICATION.

CHICULDA, EAST BERAR, 14*th May* 1870.

MY DEAR SIR ARTHUR,

When these notes were commenced I did not intend that their author's name should be known, it is better however that their imperfections should be owned.

You know me so well that, bad as the book is, you will, I trust, permit it to be dedicated to you as a token of hearty friendship from

Yours very sincerely,
A. C. McMASTER.

To

SIR ARTHUR P. PHAYRE, C.B. & K.C.S.I.

M369713

PREFACE.

(By Vagrant.)

CHICULDA, EAST BERAR, 14*th May* 1870.

THESE notes are merely the rough jottings down of an unscientific sportsman who does not for a moment suppose that there can be any information in them worthy of the information of a Naturalist. If however they corroborate that which has already been recorded by JERDON, or induce other hunters to take an interest in natural history, the aim of the writer will be attained. He has not mentioned anything which has not, or at any rate might not have, been seen by any keen Madras sportsman, of whom there are many scores better than he is, and still more whose power and experience in penmanship would have done far more justice to the subject. For this reason he has avoided the fascinating theme of field sports as much as possible. He craves pardon for having been more egotistical than a trained scribe would; when self has been mentioned he has only wished to give evidence in the first person. He begs the eminent Naturalist on whose work these notes have been grafted to forgive his having at times formed different ideas of subjects under consideration. As a lover of natural history Dr. JERDON must know how difficult it is to obtain correct information, as a sportsman he must remember how pleasant it is to take one's "own line."

Dr. JERDON'S order and nomenclature have been followed: first, because the writer of these notes is an unlettered sportsman, whose very slight knowledge of natural history has been gleaned in the open air, in swamp or forest, on hill-side or plain instead of from books, in fact a Vagrant who like the Scot of old ever "loved better to hear the lark sing than the mouse cheep," and secondly, because, even if he had scientific training sufficient to warrant his bringing

forward an opinion of his own on these matters, he knows that he could not follow a surer guide than the author of the "*Mammals of India.*"

He feels that the numerous extracts from other writers are the only parts of this book likely to be interesting. It is somewhere recorded that a sturdy Border shepherd attended Kirk to hear a new Minister. Certain portions of the discourse were quotations, the soundness of which exceedingly pleased the honest Borderer, who, as each was brought forward, nodded his head with much satisfaction and muttered, "*That's Knox*" or "*That's Chalmers, &c.*" When however the preacher spoke for himself, our shepherd with the utmost contempt exclaimed, "*That's his ain,*" and straightway composed himself to sleep. In like manner, those who find aught to interest them in this book will doubtless say, "*That's Hawkeye,*" or "*That's so and so:*" but when they say, "*That's his ain,*" the writer begs them to remember that these notes are merely an attempt by an untrained penman to support, from personal observations as a woodsman and a wanderer, what has been told by others. He does not think that there are many mistakes in what is said regarding the habits of wild animals; that there are numberless errors in punctuation, style and orthography he knows; most of these are caused by his vile hand-writing and want of practice in looking over proof sheets, and as he cannot trust himself to correct them now, he must only apologize most heartily for them, both to the publishers and readers of these notes.

A. C. McMASTER.

NOTES

ON

JERDON'S MAMMALS OF INDIA.

No. 1.—Presbytis Entellus.

JERDON, NO. 1, PAGE 4; LUNGOOR OR HOONOOMAN, MONKEY.

Jerdon gives an excellent description of these monkeys when he says at page 3, that their bodies are "comparatively slender, "and the Germans call them slim apes. Their long and slender "limbs, long tail, and the black face with an eye-brow of long "stiff black hairs pointing forwards, distinguish the *Lungoors* "from all other monkeys." Most travellers and all sportsmen in India are more or less acquainted with some of the varieties of these large and handsome monkeys which, standing very high on the legs, with bodies 30, and tails 43, inches in length, attaining *(vide page* 4 *of Jerdon)* a still larger size and in height and figure resembling greyhounds more than the baboons and apes generally seen in menageries and with showmen, are to be seen in most forests and, in Upper and Central India, in the plantations, groves, or gardens close to most villages and temples; but those who have not watched them when alarmed or excited, or who have only seen them in confinement as melancholy-looking prisoners, or when, made insolent by the reverence paid to them by pious Hindoos, they lounge in indolent familiarity and perfect impunity about gardens, grain stores and temples, can hardly realize their wonderful power and grace in jumping. All sportsmen must like Jerdon "have seen them cross from tree to tree, "a space of 20 to 30 feet wide, with perhaps 40 to 50 feet in "descent and alight in safety on the branch they sought." I think that I have seen even more astonishing and bolder springs made by them from one rock to another. But although it is not easy to

over-estimate the grace, precision and wonderful activity of these creatures in their movements among trees or rocks, I do not agree with Jerdon as to their rapidity when on "all fours."

When at Russelcondah, I came on a small foraging party on two or three trees about half a mile from the wooded hill in which were their head-quarters. Being well mounted and in the hope of a gallop at new game, I had them turned out of the trees and *laid into* their leader, an immense male, with an idea that he would give me a rattling burst before I closed with him. The ground was dry rice land, with high banks, and therefore I thought more in favor of monkey than horse ; yet I closed with the poor brute in a very few fields, and after one or two sharp turns so pressed "Entellus" that he threw himself down in despair, cursing me most heartily I doubt not, but looking so miserable that I had not heart to hit him with my riding stick, I had not a spear, and was contented with throwing my hat in his face, and allowing him to go unhurt in body, whatever he may have been in mind.

The horse, an Arab stallion of pure blood made eager in encounter by having been ripped by his first boar, an accident which as often improves a bold as it mars a faint-hearted hunter, certainly was a glorious one in pursuit of any animal that could be speared and enjoyed closing with it most keenly, but in this case I think I could have done nearly as much off a clever pony.

No. 2.—Presbytis Anchises.

JERDON, NO. 1, PAGE 6, "LUNGOOR" OR "HOONOOMAN MONKEY ;" DOUBTFUL RACE.

Jerdon remarks, that, this race was founded on a single skin from the table-land of Southern India, and, that, he thinks it by no means impossible that another race does take the place of "Entellus" there.

If this be a distinct species, it is, I believe, to be found in the Koodlighee Talook, S. W. of Bellary, probably over Mysore and the Western Deccan.

I remarked that in the Koodlighee Talook the "Lungoors" appeared to be of a lighter color, to have longer hair, and to prefer

bare rocks far from, instead of mango groves, &c., in the vicinity of villages, and to be even more than usually bold and graceful in reckless and beautiful jumping. The longer hair may have been their winter clothing, but I cannot account for my fancies about the other peculiarities.

On two or three occasions I encamped close to one of the hills in that Talook, and was much amused by the regular habits of a small colony of these monkeys, under the command, very strictly enforced, of a very fine male. Like most others, in that part of the country the hill was a mass of rocks and boulders, affording safe cover to panthers. The monkeys lived in the hill all day; each evening they were to be seen returning home under the command of their chief, who before leaving, or allowing any of them to leave a rock, carefully reconnoitred every inch of ground before him, especially if it was open, prior to rushing as hard as he could to the next vantage ground; this reached, he called the others, who in the meantime had all but their heads been carefully concealed and who followed, one at a time, as hard as they could go, some of the females, of course, with infants clinging to them: they did not object to our watching these manœuvres which were continued along one face of the hill until they reached a point sloping at an angle of about 45°, down a smooth slab, for perhaps 50 yards towards a very peculiarly T-shaped mass of boulders, which rose right out of the plain and was severed from the hill by a chasm, nothing but a bird could be suspected of daring to cross. At the top of this slope, the monkeys having assembled, their chief commenced his last rush *down* headlong to the edge of the precipice, which reached, he flew, (there is no other word for it), at a different angle *upwards* across the chasm to the bare face of the rock, which T-like, crowned the isolated mass and the summit of which appeared to afford very scant accommodation for the others, not more than a dozen at most;—he was followed, one by one, by his wives—those with babies jumping as boldly as the rest. I observed, however, that one lady, and some of the half-grown youngsters, had to make a second attempt, having either failed to get up pace enough, or losing courage at the crisis; all having reached their roost, were allowed some minutes' relaxation before being ordered to bed, some of the children even began to play. This

however was soon stopped by the master making an angry rush round the rock, biting every one he met—on which all, himself excepted, appeared to go to sleep. He, until it was too dark to see more, would sit motionless but with eyes eagerly fixed on the hill they had left and on which a panther probably would appear.

No. 3.—Inuus.

JERDON, NO. 6, PAGE 9, "MONKEY-LIKE BABOONS ;

Jerdon's remark, page 10, that the monkeys of this genus "eat frogs, crabs, lizards and insects as readily as vegetable food," applies to the Burmah variety, whole troops of which may at low water, be seen hunting in the deep black mud at the edge of the tidal creeks for any small fish that may have been left by the receding stream. I do not know whether all monkeys take to water willingly, but I am sure that, "Inuus rhesus," the Bengal monkey, page 11 of Jerdon, swims across a stream or drops into water from a tree without the least hesitation.

The activity and timidity of monkeys should preserve them from most enemies ; but I have been told of one instance where during a beat for game a large snake, probably a python, or as it is generally termed in the Madras Presidency, a "rock snake," was found having clasped within its coils, a large but still living black monkey—probably as it was in Southern India a "Malabar langur," page 8, or perhaps the "Neilgherry langur," page 9 of Jerdon.

These pythons grow to an immense size : almost my first adventure with large food for powder, I cannot call it game, was on the banks of the river Cauvery, about twenty miles from Seringapatam, where, while looking for pea-fowl, my preceptor in sport and I killed two of these reptiles ; one a female full of eggs nearly 15, the other a male more than 12, feet long ; both, the former especially, very thick in proportion to their length : I have often shot these snakes more than 9 and 10 feet long, and once saw one that had been killed by some soldiers near our stockade at Shuay Gheen in Burmah, a little more than 14 feet. Apropos of this I may mention that a friend, in whom I have the utmost confidence, told me that while looking for the Burmah wild cattle

"Bos Sondaicus," (page 307 of Jerdon), and other large game in the Tounghoo district, his attention was attracted by the screams of a deer which, being searched for, was found to be a half-grown samber expiring in the deadly coil of an immense python, which was of course slain, while the Burmese followers took unto themselves the unlucky victim, and most probably, the python also, for the flesh of snakes is much prized by the Burmans ; in fact I do not know any flesh that this, in such matters, most unprejudiced people will not eat.

Although my natural dislike to the monkey tribe is so great, that I can hardly persuade myself to admire the wonderful grace and power of their movements when wild and bounding amidst rocks or trees, I must beg all who have an opportunity, to abstain from shooting them. I admit that they offer most tempting targets, and that death from bullet or spear wound is a natural end for any wild animal, but a monkey when shot is so human-like in his actions, that I do not think any man who has once caused one so to die would willingly shoot another. I once at the request of an Ooriah husbandman, whose rice-field a troop of Bengal monkeys, (page 11, Jerdon) were plundering, shot the leader of the band of robbers ; doing good no doubt, but feeling so much like a murderer while watching the expiring animal that I registered a vow never again to fire at one of his race.

No. 4.—Loris Gracilis.

JERDON, NO. 11, PAGE 15 ; SLENDER LEMUR.

The Burmese name for this little animal, "Monkey's concubine," gives a better idea of its appearance and manners than the Hindoostanee "*Shar mindee Billee,*" shame-faced or bashful cat. Although so little known they are not uncommon. I found a pair in a thick clump within a few miles of Vellore, I had one brought to me at Bangalore, and have several times seen specimens of this, or of a very closely allied species at Rangoon, Shuay Gheen and Tounghoo, in Burmah. A pair that I saw in confinement at Tounghoo were fed entirely on plantains, one I have since seen in at Bangalore would eat grass-hoppers and other insects. They appeared to sleep all day huddled together in a sitting position with the head sunk on

the breast, much in the way a monkey does, this habit may have given rise to the idea mentioned by Jerdon at page 15, in the account of the last species "tardigradus," that they sleep head downwards. The following extract from "Doctor John Fryer's "voyage to East India and Bombain," doubtless refers to this little creature and is too good to be lost. The quaint old seaman seeing them in this position and supposing that they "walk upright not "pronely," probably took the length of the leg into account and thus increased their size to "Half a Yard."

"Woods are everywhere in which sometimes are met Inhabi-"tants not yet mentioned, and for their Solitariness called Men of "the Woods, or more truly Satyrs ; there are Neriads too, or Men "of the Rivers, but dye as soon as taken ; A couple of the former "I saw asleep, in the day-time, in the Night they Sport and Eat ; "they were both in a Parrot Cage, they had Heads like an Owl, "Bodied like a Monkey without Tails ; only the first Finger of the "Right Hand was armed with a Claw like a Bird, otherwise they "had Hands and Feet which they walk upright on, not pronely, as "other Beasts do ; they were colored like a Fox of the length "of Half a Yard ; though they grow bigger till Twelve Years old "when they Copulate."

The slight spice of the marvellous set aside, this description of this very odd looking and, even now, very little known animal, is almost perfect. The only sound I have ever heard one of these lemurs utter was a faint whine, but I have been told by a brother sportsman, that one which he saw captured among the Karanee hills in Upper Burmah, uttered the most piercing yells ; it probably was the last species "tardigradus."—No. 10, page 14, of Jerdon.

No. 5.—Pteropus Edwardsi.

JERDON, NO. 12, PAGE 18 ; FLYING FOX.

Jerdon remarks that, before these bats fly off for their nightly rounds, they fly cautiously down and touch water if it is at hand, but, that he could not ascertain if they took a sip or merely dipped part of their bodies in. I have always fancied that they drink on these occasions, they certainly do not fish as has been sometimes supposed. They often turn in their flight and appear to hawk at, or

pursue some object in the air : therefore, unless it is very clear that they are not in the least degree insectivorous, I think, that they would not pass over a moth or flying ant that crossed their line of flight. I attempted to calculate the numbers in a colony, probably the one so well described by Tickell, page 19 of Jerdon, as it was close to his house in Rangoon. In five minutes a friend and I counted upwards of six hundred as they passed over head en route to their feeding grounds : supposing their nightly exodus to continue for twenty minutes, this would give upwards of two thousand in one roosting place exclusive of those that took a different direction. The colony of night herons, that, unknown to most, inhabit the cantonment of Rangoon during the dry season, almost always crossed their flight as each force left its respective head-quarters. The Burmans and many of the Madrasees are very fond of the flesh of these animals, and I have known one officer who like Colonel Sykes, page 19 of Jerdon, spoke in high terms of it, "de gustibus non est disputandum."

I have heard from excellent authority, that in the hot season of 1866, many flying foxes from the colony that infests the neighbourhood of the Poonamallee Road and Saint Andrew's Church at Madras, were affected by the hot land winds in the manner mentioned at page 19 of Jerdon, and were picked up dead.

No. 6.—Megaderma Lyra.

JERDON, No. 15, PAGE 22 ; LARGE-EARED VAMPIRE BAT.

In reference to Mr. Blyth's statement, page 22 of Jerdon, "that "this bat sucks the blood from other bats, fixing on them behind the "ear, and sucking the blood." I remember in Rangoon a case clearly proved, where a tame canary was thus killed by a bat. I think that the mate of the bird was destroyed in the same way a few days afterwards, but of the first case I have not any doubt.

No. 7.—Nycticejus Heathii.

JERDON, No. 42, PAGE 37 ; LARGE YELLOW BAT.

One of the houses at Samulcottah, Northern Circars, was infested and made almost uninhabitable by a colony of large yellow

bats, probably of this species, bringing into it half-eaten frogs, bits of which were left everywhere, on tables, books, beds, &c.

I do not think that the "faculty of creeping about on a vertical "board by hitching the claws into the minute pores of the wood" noticed by Mr. Blyth, vide page 31 of Jerdon, is confined to any bat in particular. I think that almost any bat will so move when, on being disturbed during the day, it thinks it can gain a hole or place of safety without being forced to fly into the light.

Tickell's remark at page 19 of Jerdon, when he speaks of the large fox bats "hooking themselves along the branches, scambling "about hand over hand with some speed," refers I imagine to very nearly the same style of progression. It is difficult however for an untrained naturalist to give a trustworthy account of any bats that infest houses, they are to me so offensive in every way, that in my case, instant war has been proclaimed wherever I have found them, therefore I have not studied their habits with attention or ordinary patience.

No. 8.—Kerivoula Picta.

JERDON, NO. 53, PAGE 43; PAINTED BAT.

I can corroborate Jerdon's remark at page 43, that this beautiful bat when disturbed in the day-time looks more like a butterfly or moth than a bat, for while making a collection of butterflies at Rangoon I had a very brilliant bat of, I imagine, this species brought to me by a native who thought it was what I wanted. I afterwards killed one very like it in a house at Madras.

I have never seen it elsewhere, but, from what I have heard, I believe it is by no means uncommon in the Southern part of the Madras Presidency, where it is, I have been told, called by natives "the plantain bat," as it is constantly found concealed in the large rolled-up leaves of that plant.

No. 9.—Sorex Cærulescens.

JERDON, NO. 69, PAGE 53; COMMON MUSK SHREW.

This poor little musk rat is more sinned against than sinning—it certainly does more good in killing cockroaches than it does us

harm in other ways, unless indeed the damage done to our corks, when we neglect to look after them, be taken into account. The unprepossessing exterior, evil odour, and shrill voice of this little creature make it most unpopular.

I disbelieve the almost universal Anglo-Indian idea mentioned at page 53 of Jerdon that the passage of a musk rat over a corked bottle of wine or beer will infect the contents. English-bottled liquor is never tainted in this way. That much liquor, both wine and beer, bottled in India is undrinkable from the musky odour we all know too well ; but the cause is neglect in looking after the corks before they have been used, probably also in seeing that the bottles are perfectly clean.

I am not sure that a musk rat unless when disturbed or frightened exhales its odour, whether this be the case or not, I admit that corks previously to being used, are in India often impregnated by some vile smell, but just as often in my opinion, that of cockroaches as of musk rats, and that much liquor is ruined therefrom ; cockroaches too, often get into empty bottles, but I cannot for an instant believe that the scent of a musk rat could pierce through well-corked glass. If the odour of musk rats were sufficiently acute and penetrating to do this mischief, most of our houses in India would be uninhabitable, our book-shelves and chests of drawers unapproachable.

Britons came to India prejudiced against shrews and perfectly ready to believe any evil against them, for instance—

At page 450, *Quarterly Review*, for April 1868, there is the following remark in an article headed " The Farmer's Friends and Foes." " Every one is doubtless acquainted with the form of that " mouse-like creature, the common shrew (Sorex Araneus. Linn) " with velvety fur and long prominent snout, so common in our " fields. This animal must be enumerated among the farmer's " friends. Possessing like its relative the mole a rapacious appe- " tite, it does much good by consuming various insects both in " their larval and adult stage. Amongst the superstitions of old " times this little creature held an unfortunate place, it was seriously " believed that the shrew was a formidable enemy to cattle."

The article goes on to mention a case taken from 'Brand's Popu-

lar Antiquities,' where a farmer near Bideford, on finding that one of his sheep had lost the use of its hinder parts evidently from a blow or some violence which had injured the spine, attributed the injury to a mouse having crept over its back, and expressed a determination to cure the animal by means which were never known to fail, viz., to procure a field mouse, which he should inclose within a hollow in the trunk of a particular tree, and having left it there to perish, he should bring back with him some of the branches of the tree for the purpose of being drawn across the sheep's back, and that as soon as the devoted mouse had yielded up his life a prey to famine, the sheep would be restored to its proper strength and vigour.

I find in a copy of a book that was considered good authority in former days, viz., "*Cheap and Good HVSBANDRY for the* "*well-Ordering of all Beasts and Fowles, and for the generall* "*Cure of their Diseases.*"

"*Contayning the Natures, Breeding, Choise, Vse, Feeding and* "*Curing of the diseases of all manner of Cattell, as Horse, Oxe,* "*Cow, Sheepe, Goates, Swine and tame Conies.* * * *

"*Gathered together for the general good and profit of this* "*whol-Realme, by exact and assured experience from English* "*practises, both certaine, easie, and cheape: differing from all* "*former and forraine experiments, which eyther agreed not with* "*our Clime, or were too hard to come by, or ouer-costly, and to* "*little purpose; all which herein are auoyded.*"

"*The Third Edition.*

"*Printed by T. S., for Roger Iackson, and are to be sold at* "*his Shop, neere the Conduit in Fleet Street*—1623"—
which I possess, and which I like to suppose may have once belonged to some old cavalier or squire of Sir Walter Scott's novels—the following extract which, after its quaint fashion, may interest those who, like me, read more for amusement than for profit. In Book 1, which treateth of "The generall Cure of all Cattells Chapter 39 is written thus:—

"*Of being shrew-runne or shrew bitten.*"

"*A Shrew Mouse which is a Mouse with short vneuen, legges* "*and a long head, like a swine's, is a venemous thing, and if*

"bite a beast, the sore will swell, and rankle, and put the beast "in danger; but if it onely runne ouer a beast, it feebleth his "hinder parts, and maketh him vnable to goe: the cure then for "being shrew bitten, is the same which is formerly shewed for the "biting of other venemous beasts: but if he be shrew-runne, you "shall onely draw him vnder, or beate him with, a Bramble which "groweth at both ends in the Furrowes of Corn lands."

This curious book (which is signed G. M. and was doubtless written by "*Gervase Markham, Gent.*," (a copy of whose "*Maister-Peece*" "*On All Knowledge belonging to the Smith or Horse Leech*" and for the "*eighth time newly Imprinted*" in 1656. I have also) shows further, "*the whole Art of Riding great Horses with "the breaking and ordering of them: and the dieting of the Run-"ning, Hunting, and Ambling Horse, and the manner how to vse "them in their trauaile. Also approued Rules for the Cramming "and Fatting of all sorts of Poultry and Fowles, both tame and "wilde, &c. And diuers good and well-approued Medicines, for "the Cure of all the diseases in Hawkes of what kinds soeuer.*

"Together with the vse and Profit of Bees: the making of "Fish ponds, and the taking of all sorts of Fish."

Besides men, musk rats have many enemies. I once saw one in the mouth of an immense guana, whose long scaly throat the poor shrew, uttering shrill lamentations meanwhile, was doing his best to retaliate upon.

No. 10.—Erinaceus Micropus.

JERDON, No. 86, PAGE 63, SOUTH INDIAN HEDGE-HOG.

I see that Jerdon's only specimen was procured at Trichinopoly, (page 63) where I got the only hedge-hog I have seen in India out of a Museum. To the Madras Museum, I sent my animal. I was told that they are not uncommon about Trichinopoly, but as I have not succeeded in getting another specimen, although I have tried hard for one, I imagine that they are rare.

No. 11.—Tupaia Peguana.

JERDON, No. 88, PAGE 65; SEKIM-TREE SHREW.

The Burmese Tupaia is a harmless little animal; in the dry

season living in trees, and in the monsoon freely entering our houses and in impudent familiarity taking the place held in India by the common palm squirrel, it is however, probably from its rat-like head, and thievish expression, very unpopular. I have found them in rat-traps however, so possibly they deserve to be so. I cannot endorse the statement regarding their "extraordinary agility," page 65 of Jerdon, for they did not to me appear to be nearly so active as squirrels : at least, I remember one of my terriers on two occasions catching one, a feat I have never seen any dog do with a squirrel ; cats of course often pounce upon them.

No. 12.—Ursus Malayanus.

JERDON, NO. 90, PAGE 71 ; BURMAH BEAR.

If ursus "Malayanus" be the Burmah bear ; the description under No. 90, does not give a clear idea of it. The Burmah bear has a glossy black coat, with short and smooth hair, muzzle blackish, but face, mouth and lower jaw dirty-white, throat black, dividing the white part just mentioned from a large, heart-shaped white mark covering nearly the whole breast with a large black spot in centre and a few minute black dots over remaining portion, the lower part of this heart is continued by a white line between the fore legs, and widened out again on the belly into a large irregularly-shaped spot. The head is flattened and very short, with far more of a canine than an ursine expression—ears very small, smooth and round. The animal is somewhat smaller than ursus labiatus of the same age and sex (female about three years old) would be, but very powerful and certainly far more intelligent and lively than any specimen of ursus labiatus I have seen. These notes were taken from a well known animal, "Ada"—presented by me to the People's Park at Madras, and which in good humor, playfulness and amusing tricks much resembles the bear mentioned by Sir Stamford Raffles in his notes. Like his pet, "Ada," is never out of temper and always ready to play with any one. While she was with me, "Ada" would not eat meat in any shape. But I was told by one of the ship's officers that another of the same species, "Ethel," (also presented by me to the Committee of the People's Park of Madras and by them sent to England) while

coming over from Burmah, killed and devoured a large fowl put into her cage. I do not doubt the *killing* for at that time "Ethel" had not been long caught, and was a little demon in temper, but I suspect that while attention was taken off, some knowing lascar secured the body of the chicken and gave her credit for having swallowed it. There were however certainly some feathers and other remains of fowl in the cage.

Since the above was written, I have heard of poor Ada's death; her last illness, more than ever proved her good qualities, for she was, I am assured, up to the end as gentle as it was possible for animal to be. She will be a great loss to the Madras People's Park, to the young visitors especially; for she was in every way one of the most engaging pets I have ever known. I fancy that these smooth-haired bears climb even more readily than do our shaggy Indian breed. "Ada's" greatest delight was in getting up small trees, and the only offence I ever knew her guilty of, was a propensity to get on the roof of my out-houses at Rangoon, once there, she damaged the tiles; rare and valuable articles in Burmah, in the most ruthless manner. Even when she was a chubby infant, I could, by merely striking the bark, or a branch some feet above her head, cause her to scramble up almost any tree. At this time poor Ada, a Burman otter, and a large white poodle were, like many human beings of different tastes or pursuits, very fast friends.

The alliance was however an excellent illustration of mind and training over matter; for the old dog although toothless from years and the weakest of the trio, was much respected by the others who obeyed him most dutifully whenever he thought fit to exercise authority. Jealousy was, I fear, his worst point: when he was excelled in any way by his companions he lost temper sadly. If "Ada" after a game, scrambled into a tree out of his reach, he waited with patient gravity for her to come down again, when he forthwith assaulted her most savagely; in the same way when he and the otter were swimming together, as they often did in a pond near my house, and the latter by diving, or speed got away from him, the old dog would at once swim to the bank, where he watched until the otter, as it always did, came to shore, and lay sprawl-

ing half in and half out of the water, squeaking loudly to any of its acquaintances, he then seized it, always by the nape of the neck, and ducked its head under water in the most comical way.

No. 13.—Ursus Labiatus.

JERDON, No. 91, PAGE 72 ; INDIAN BLACK BEAR.

I do not think that bears ever attack without provocation, except perhaps when come upon during the breeding season—which is, I imagine, at the commencement of the rains, June to August in most places. In the very few instances I have known of bears going out of their way to fight, I think I traced the effect back to the same cause. I can corroborate Tickell's excellent description at page 73 of Jerdon. I have by the noise he mentions, been guided to, within a few paces of, a bear and shot him in the act of sucking out white ants.

Painters and sportsmen, from observing the antics of tame dancing bears and the animal's progress over the rugged ground they most frequent, have involuntarily allowed themselves to believe the travellers' tale that bears charge in, or at any rate, often assume, an erect position ; a bear when suddenly startled, by something in front of him, naturally throws himself upon his haunches and thus, in consequence of his peculiar formation, stands upright for a moment ; in scrambling over rocks he sometimes appears to be erect, perhaps he may occasionally rear up for an instant to get a better view, but with these exceptions he goes as much on all fours as any other quadruped. During more than ten years' shooting experience in the Deccan and the Northern Circars, I must have seen very many scores of bears, and can only call to mind five instances of these animals standing erect—of these cases, four were caused by the agonies the poor brutes suffered from wounds, a fifth certainly meant mischief, and was on his hind legs at the instant I killed him almost on my gun's muzzle, but I think his position was a mere accident of bad ground. Having been worried (much as a cat is by a terrier) by a bear, and having seen other instances of their "coming home," I can from experience say, that they do not "*charge*" in an erect position. Often as it must have been heard by almost every keen sportsman in India,

I do not think, that I have ever seen mentioned in print the peculiar melancholy, wailing cry almost always uttered by a bear before it dies ; most other wild animals die without an outcry except a hare when seized, or sometimes a deer when shot, but to the latter in such cases, I have always given credit for having been hit through the lungs, or some air passage which makes the scream involuntary ; I am sure it was so in one case with a samber I killed. I do not of course allude to the angry grunt, roar or snort of alarm or defiance with which a large beast, after his kind, receives bullet or spear thrust ; but a bear although, up to the last, he receives such punishment without any further sign than loss of temper, no sooner makes up his mind to die, than he utters most melancholy and pitiable lamentations. I feel sure that any sportsman will bear me out in this.

There was in Madras in 1867 an albino, or rather dirty-white, bear led about by some jugglers who said that it had been caught in the Salem district.

Jerdon does not at page 71, give bears credit for much cunning when he says that "It has been noticed that if caught in a noose "or snare, if they cannot break it by force ; they never have the "intelligence to bite the rope in two, but remain until they die or "are killed." About this I know nought, but the natives of Goomsoor say that unless a bear, or a wild hog is driven rapidly into a net it will always escape these toils, as either of these animals is so cunning that he will lift the net up with his snout, and so pass underneath. The three unlucky bears mentioned at page 24 and which were so unfairly poached, certainly did their best to bite through the nets which were considerably damaged. I can corroborate what is said by Mr. Elliot at page 73 of Jerdon as to the food of bears, particularly as to their partiality for the seeds of "cassia fistula," they are likewise very fond of mangoes. The long mango grove at Nowgaum near Russelcondah, during the season, always held several bears at night ; but it is strange that neither he nor Mr. Jerdon allude to the fondness of bears for sugar-cane and the damage done by them in fields of this plant.

In Goomsoor and other parts of the Ganjam district where bears abound they do considerable damage to the sugar-cane plantations

which sometimes are very large, often covering many acres. It is perhaps needless to say, that when ripe, a field of sugar-cane is almost as dark and dense a mass of vegetation as even the tropics can produce.

Into these luscious thickets come the bears at night, silently when en route, for then they might be turned back, and at once proceed to business, utterly regardless of the vile noise of the sugar mills ; one of which, at least, is in the corner of every field, two or three in a large one, working while the cane is ripe by day and night for weeks together without intermission except perhaps for an hour at dawn, on rude wooden screws, which roughly hewn out of logs of timber, make a woful creaking to be heard for an immense distance on a still night, and, as an old Ooriah farmer once expressed himself, causing the bears to "feel as if they had stones in their ears," *i. e.*, as if they were deaf.

It is very easy to find where the bears are, as if sought for, they sometimes three together, (dam and two nearly full-sized cubs to wit) may be heard making their way through or pulling down and munching the canes, but it is almost impossible to get a shot, for the brighter the moon outside—the blacker and nearer the color of Bruin's coat is the impenetrable gloom within, while he is quite cunning enough to keep perfectly still when any one approaches him, and to look out for a clear line of country when he chooses his starting place to the nearest safe cover at daybreak,—therefore although the temptation to go out is not often resisted, the results are seldom satisfactory.

Often after mess on a moonlight night during the cold season some excited Ooriah would run into Russelcondah to tell us that bears were in his field perhaps so close that we could hear his mills at work. Guns, horses and blankets were forthwith ordered out ; and one, or perhaps two or three of us would start for the mill which, the detestable creaking set aside, was a pleasant spot to visit.

The cane was crushed between two large screws working by means of bullocks, three or four relays of which, fed on the refuse cane were always on the spot. The expressed juice was led into large earthen pots which as soon as filled were set upon a roaring fire, always burning at the mill, and thus the coarse sugar was

prepared in the field in which it grew. The scene lit up by the fire as it was fed by the crushed cane, was always a bright and cheery one. The people were happy and comfortable, and as the night air in that part of the country is very chilly, the fire was by no means unpleasant. Presently some one, sent out to explore, reports that the bears are at work in a certain part of the field. Off to it we at once go, dive into the thicket and hear the enemy crashing through the reeds close to us. An effort is made to make him come into view or to drive him into the moonlight—he is far too cunning for this however, and either with an angry grunt bolts into the thickest part of the plantation, or more probably stands perfectly still until we have passed him. We return, have our blankets spread on a heap of straw or cane leaves in a corner of the mill, and regardless of the dismal noise go to sleep until the bears are heard again, and we are roused to go forth once more, perhaps three or four times on similar bootless errands. Morning comes and we go back again, vowing that we shall never again be tempted out to try to shoot bears in cane-fields.

During three years that my regiment was quartered at Russelcondah ; although expeditions of this sort took place, as far as some of us were concerned, almost every moonlight night during the sugar season—and although we were almost all pretty well-trained to bear shooting in an orthodox way ; I do not think that half a dozen bears were killed in these trips. I do not now remember being at the death of one bagged in this manner, although I must have assisted in disturbing many dozens. Bears have, I know, been often speared from horseback, but I have only had one opportunity of trying this feat. The horse I rode, a keen hog-hunter, closed within spear's reach of the bear quite as readily as he would have done with a boar and allowed me to use my weapon freely.

No. 14.—Arctonyx Collaris.

JERDON, NO. 93, PAGE 77 ; HOG-BADGER.

I think I have on three occasions come upon this animal among the mountains N. E. of Shuay Gheen on the Sitang river in Upper Pegue—each time early in the morning and in a deep ravine, I was after large game when I saw them, so could not afford to fol-

low a badger, I was much struck with their peculiar bear-like gait. Whether the animals I found there, belonged to this particular species or not, I cannot say, but that they were badgers, I have not any doubt.

No. 15.—Mellivora Indica.

JERDON, No. 94, PAGE 79; INDIAN BADGER.

In its wild state I have only twice seen this animal. The first time while I was looking for bears on a rocky hill in the Deccan, one shuffled past me just at daylight, reminding me much of a small bear by his ways. The other was brought to me at Russelcondah, in the Northern Circars; it had been, I was assured, killed by one of the drummers of my regiment in his fowl-house, which it probably entered with felonious intent.

Two that I saw in confinement appeared very good-tempered, and much more playful than tame bears would have been. They were, I think, fed entirely upon vegetables and rice and milk. In the Northern Circars they are known as "grave-diggers;" and as Jerdon says, accused, but I believe most unjustly of digging out dead bodies. Jackals and hyænas are, I think, the only Indian animals guilty of such sacrilege.

No. 16.—Lutra Nair.

JERDON, No. 100, PAGE 86; COMMON INDIAN OTTER.

I can corroborate Jerdon's remark at page 87, that though partly nocturnal in their habits, otters may be seen hunting after the sun is high. Late one morning, I saw a party, at least six in number, leave an island on the Chilka lake and swim out apparently to fish their way to another island, or the main land, either at least two miles off, I followed them for more than half the distance in a small canoe. They worked most systematically in a semi-circle with intervals of about fifty yards between each, having, I suppose, a large shoal of fish in the centre, for every now and then an otter would disappear, and generally when it was again seen it was well inside the semi-circle with a fish in its jaws, caught more for pleasure than for profit, as the fish, as far as I could see, were always left behind untouched beyond a single bite; I picked up several of these fish, which, as

far as I can recollect, were all mullet. Like all wild things about that glorious bit of almost unknown water, these otters did not appear to dread man ; when they rose, as they often did close to the canoe, each took a bold look before it dived again, generally while up, uttering short, sharp squeaks. I shot the largest of the band and (as I deserved, for the act was useless and wanton) lost him. The others however fished on in the same order well out to open sea, for the Chilka lake is little short of that—until I left them ; my boatman being too exhausted at the pace he had to push the little canoe along to keep near them to follow further. I have seen three or four otters that would follow their master like a dog, and had one that would do so, keeping up all the time a series of most unreasonable and annoying squeaks.

I trust that I may be excused if I attempt to describe the Chilka lake : for even among Indians, there may be many who have not a very distinct idea of its extent or even where it is.

This magnificent piece of water, I speak only as a sportsman or as a lover of wild life and wild scenery, divides the Ganjam district, the extreme limit of the Madras Presidency in the direction of the Northern Circars, from the Bengal province of Cuttack, and may in rough terms be said to extend nearly from Ganjam to Juggernaut, that ill-famed focus of Orissa idolatry. It thus runs pretty nearly north and south, parallel to the Bay of Bengal, from which on the eastern shore it is only separated by a neck or ridge of sand hills not much more than a mile broad ; now only known to pursuers of wild fowl, antelope or foxes, and to the few pilgrims from the south who still take that road to Juggernaut. In former days it had an evil name however, for it was infested by a band of Thugs, who lived by plundering and murdering pilgrims going to the temples ; coming from Juggernaut, after priests and holy men had secured their dues,—there probably did not remain much worth stealing. A batch of these Thugs had been, as was the good old custom, executed upon the spot where their crimes had been committed and their bodies, suspended in iron cages, once adorned an immense gibbet which stands, or stood, at Priaghee near the south-eastern corner of the lake ; and under which my servants, looking more to a dry spot than the propriety of the measure, once pitched my little

shooting tent. I did not find that the spirits of the ruffians, their bodies had become dust long before, or of their victims, for it was within a few yards of this spot that most of the murders had been committed, interfered in the least either with my sport or my comfort. But to return to the Chilka lake, which is salt, or brackish, water throughout, is (I speak from recollection only, not from a book, so may be, very probably am, wrong) about forty miles long and is nowhere more than about sixteen miles, generally not half that in breadth. Unless in a very few places it is shallow, hardly ever beyond the reach of the long bamboo poles with which the boats used on the lake, are pushed against the wind. For miles together there are immense spits or shoals, of acres of sand or mud over which the water is, in spots, often not more than a few inches deep, and on which water-fowl, of I believe almost every kind that visits India, swarm beyond my powers of attempting to describe. Scattered at intervals are several beautiful islands, most of them however wooded to the water's edge so densely that it is of little use trying to penetrate them. The shores of the lake however abound with game of almost every description (ibex, and elephant excepted) known to the sportsman of Southern India. Although the country adjoining the hills is at certain seasons very unhealthy, near the coast there is little to dread ; and the climate, from December to March is delightful ; and on the Chilka, were it not that one has to cease shooting for very shame or pity, for the endless varieties of water-fowl are so tame, so well-accustomed to harmless fishing boats, and so little to guns, that shooting them soon becomes butchery instead of sport, the amount of the bag would be limited only by the supply of ammunition. I certainly cannot picture to myself a spot more likely to please and interest a sportsman or a naturalist than this noble sheet of water which during the cold season is visited by, I think, most of the migratory water birds that resort to India. The Chilka might now be very easily visited from Madras. A coasting steamer would drop the passenger at Munsoorcottah close to Berhampore, a small military post, then a pony or a palankeen takes him to Ganjam, past the civil station of Chetterpore, the head-quarters of the Ganjam collectorate, where, as in all places where Indian Civilians dwell, hospitality and lovers of field sports are sure to be.

At Ganjam, once a large civil and military station abandoned, I believe, about 1820, in consequence of an outbreak of fever which has never re-visited the spot, he easily finds shelter in one of the fine old houses now deserted.

Ten or twelve miles further on is Rumba, near the southern extremity of the lake ; there let him hire two large boats which he can get by the day for a very small sum, put his palankeen into one as a sleeping place for himself, of course he must dine, dress, and in fact live in the open air. His servants and kit are in the other boat. Then let him go forth and slay until his ammunition fails him.

The little dug-out canoes of the Ooriah fisherman make admirable substitutes for duck punts and all the more interesting that the unusual weight of the white man, his guns and henchman is sure to disturb the caulking of some leak through which the water pours in a way startling to contemplate ; the big boats or land being miles off, a rough sea, at least for so frail a craft, being on and some enormous alligators having been seen that morning.

Our boatman however quietly shoves the canoe to the nearest shoal, which is covered with water birds beyond count or calculation, and, while we are murdering some of them, calmly gets out, clutches from the bottom a handful of sticky black clay and crams it into the leak which it perfectly stops for half an hour or so when the same proceeding has to be repeated.

No. 17.—Lutra aurobrunnea.

JERDON, NO. 101, PAGE 88 ; SMALL HILL OTTER.

I have on several occasions, near the Karenee Hills, N. E. of Burmah, seen parties of very small otters, five or six together in the beautiful clear streams that run out of those hills. The beautiful Bogatha river, about twenty miles north of Shuay Gheen, and the Shuay Gheen river itself were two of these streams. I have also seen them when on shooting trips from Tounghoo.

Being on each opportunity of seeing them loaded with ball and after large game, I could not shoot one. They seemed to be not more than half the size (if indeed so much) of the common otter,

and to swim silently, not with the constant short squeaks of the larger kind ; but further evidence except, that I believe there is a distinct species of small hill otter, I cannot give.

No. 18.—Lutra Leptonyx.

JERDON, NO. 102, PAGE 89 ; CLAWLESS OTTER.

In a river or creek as it is called in Burmah, which enters the Sitang river just north of Tounghoo, and within a mile or two of the N. E. angle of the old fort, or city of Tounghoo, used to be a colony of white-throated otters that always to me appeared to be smaller than those I had seen elsewhere, although much larger than the "hill otter," they lived in a series of burrows, under some trees which had partially been washed into the water, and although they might any day be seen by me, and could always be found by my dogs, they were so wary that I have only had one chance of shooting one. This I let slip, as one of my terriers when in pursuit of a cub, was so gallantly charged by the mother, that, in sheer admiration of her devotion, I would not fire at her. The cub escaped during the disturbance, and my softness of heart lost me certainly one and probably two very interesting specimens.

No. 19.—Felis Tigris.

JERDON, NO. 104, PAGE 92 ; THE TIGER.

One of the best sportsmen in Southern India, gave me some interesting accounts of the habits of the tigers that infest the hill ranges there.

On one occasion he saw five tigers, a herd in fact, sire, dam and three full-grown cubs, walking leisurely from one hill to another ; again, while he was from a hill top, watching some samber, he saw a large tiger stalk, and when near, rush at them more, as he said, in the style of a hunting cheeta than it is generally supposed a tiger does.

These glorious illustrations of natural history, must have impressed themselves for life-time on his memory, and have been sufficient to repay a lover of the open air for much of the exposure to sun

and storm, the discomforts of all sorts, the constant failures, the trials of temper and health, and the wear and tear of constitution which are allotted to every sportsman in India. I have seen two tigers standing in the clear moonlight close to me. While my regiment was marching in the Deccan, a brother officer who met with an untimely death, a few years after from the accidental discharge of his own gun, thought he saw a hyæna passing through some low brushwood, and with ordinary small game ammunition having pushed forward to intercept the beast, he suddenly came upon three large tigers, the last of which stopped to look at him ; both of these were scenes to be remembered, but the vision of five large tigers together must have haunted the fortunate spectator for many a day. Any one who has seen the onslaught of a hunting leopard on an antelope, must envy the man who can have witnessed the rush of a tiger, albeit an unsuccessful one, at so fine a deer as a samber.

He also mentioned a case, where a brother sportsman who had just shot a female elephant, heard a few minutes afterwards, a most unusual uproar in the jungle ; on reaching the spot he saw, on the head of the orphaned calf of the elephant, a tiger which he shot in the act of pulling down the young animal. Also ; with reference to tigers eating carrion, that they almost always devour dead bison, that may have been shot in their neighbourhood ; not while the meat is fresh however ; but (as was evident from their traces) visiting the spot often and waiting until the flesh became high enough to suit their epicurean palates. He also told me that he knew an instance of a tiger coming to the body of a dead elephant and devouring part of the trunk ; a somewhat similar case occurred to a brother officer of mine, who having shot an elephant near Bogatha, twenty miles or so north of Shuay Gheen in Burmah, left a couple of men to cut out the tusks ; night coming on before the task was completed, they got into a tree, having of course made some rude platform for that purpose ; before dusk a tigress with two cubs came to and commenced to eat the dead elephant : while she was so engaged, one of the men shot her on the carcase. In corroboration of the idea that tigers sometimes feed on reptiles and small animals, referred to at page 94 of Jerdon, I may mention that I saw

taken from the stomach of a tiger a large bit of the scaly hide of (Manis pentadactyla) the Pangolin or Ant-eater. (Jerdon, page 314, and page of these notes.)

The brute was a "man-eater," which may account for his having taken to this strange diet, finding it like human flesh, more easily procured than beef or venison ; to obtain either of which, an iron bullet, that had lodged just above one of his fore-paws, must have for some time made no easy feat ; he had quite recovered however, and notwithstanding the idea that man-eaters are in bad condition, was fat and sleek as a well-groomed horse.

I have often heard doubt thrown on the statement made in the "Old forest Ranger," (I mean Colonel W. Campbell's well known work, not the Old Shikarry's) and referred to at page 96 of Jerdon, that a tiger is sometimes driven into a net and speared ; about this I know nought, but near Goomsoor I saw three full-grown bears run into a net that had been placed across one side of a wood we were beating, and all get so entangled that they might easily have been speared had a fit weapon been at hand ; instead of this they were very unfairly shot ; the noise they made can be better imagined than described. A net that could hold three bears, might puzzle a tiger.

I have to apologize for recording a deed so unsportsman-like and so worthy of the vilest poacher : but in justice to my comrade and myself, I must explain ; that neither of us had an idea of what was going to happen, nor have I ever seen nets used except by this gang of beaters.

"*Toiles*" were however considered orthodox aids to sport until even the end of last century. Some old books I have, viz : the "Gentleman, Citizen and Countryman's Pleasant and Profitable Recreations," published in 1697, and "Healthful Amusements and "Ingenious Exercises or the Nobleman's Pocket Companion" of a "later date," have no shame in recommending them ; while in a series of seventy excellent plates of the "British Sportsman," by Samuel Howlett, No. 10, drawn in 1798. "Toiling a buck," represents a fallow stag running into just such a net as I have mentioned.

We all know the stealthy movements of a cat and how wonderfully fitted to the habits of the creature is the beautiful mechanism

that causes the noiseless footfall ; but, unless witnessed, it must be difficult to conceive the deadly silence in which so heavy an animal as a large tiger can make his way.

I was standing at the edge of a wood one burning day in April, the middle of the hot season in most parts of India. The dry leaves and twigs with which the ground was covered, rustled so audibly when moved by breeze or living creature, that one might have fancied it impossible for a mouse to pass unheard ; I remembered afterwards that a hare, a jungle hen, and some small lizard, had each as they ran by, attracted my attention, and that of the man beside me, by the crackling rustle of the dead leaves ; and that, during our trip of three days, even the deer of various kinds we saw could not move without making the presence of some living thing known as they got over the ground. A small herd of samber especially, the day before, had galloped down hill with as much clatter of hoof as an equal number of troop horses.

Almost at the first distant shout of the beaters, the large man eating tiger before mentioned came out close to me, so noiselessly that, had not my eye caught him, he might have passed unobserved by me, as he was by the trained and trusty gun-carrier standing at my elbow, and who, looking in another direction, and not seeing me raise the gun, had not, although his ears were from constant practice as keen to any noise on hill-side or in forest as those of the wildest animal, an idea that game was on foot until he heard the angry growl with which the animal received his death-wound.

Again, while my regiment was marching in the Northern Circars an officer's servant, who with the mess kit had, as is often done, preceded the corps to the next encamping ground, was, just at dusk and close to the mess guard, carried off the high road by a tiger ; an infant he had in his arms, when he was seized, was quite unhurt in the awful rush that must have taken place. As far as I can remember this child was about eighteen months old, it would be interesting to know what effect the recollection of the scene may have on it in after-life.

On hearing of the tragedy next morning when we reached our encamping ground, three of us went back to the spot about three

miles, to try to recover the body. Except that we had to make our way in Indian file through thick thorny bushes under which some times we had to creep on hands and knees, the trail, marked with fragments of clothes, the cap, keys, purse, blood and hair, of the victim, was an easy one. The body was very little mangled, so it was determined to wait for the return of the tiger, and in the mean time to put up a small platform in the only tree near. I had work in camp, therefore left my two comrades who took breakfast and shelter from the sun (it was then near mid-day) under a bush close to, but not within sight of, the body, which was not a pleasant spectacle during their meal. Their gun-carriers were about the spot, collecting the rough materials at hand for the platform: while all were thus employed, the tiger carried off the body from their midst in open day and through not very thick brushwood without being observed by any one. I returned to them soon after, as they were then trying to follow the trail; this time without success, for the body had now neither blood nor rags to mark the path, and the ground was hard. It is difficult to conceive how the beast could thus have outwitted them, but so it was.

I still think from the trail, as we had first had it, that this was a very small tiger, or more probably, tigress. I have been assured that the animal was an immense male which was killed near the spot some months afterwards by a native, but I can hardly imagine that I could have been so mistaken in the size of the foot-print.

Since writing the above I have with reference to Mr. Walter Elliot's remark as quoted by Jerdon at page 94, that "The Bheels in "Kandeish say that in the monsoon, when food is scarce, the tiger feeds on frogs"—been told by a well known sportsman, that he has been assured by these people, that they have often seen tigers catching frogs, by hooking them out of shallow pools with their paws. The mode of marking down tigers, followed by these native hunters gives them, he remarked, peculiar facilities for acquiring trustworthy information regarding the habits of these animals. On a tiger being tracked into, or known to be in a certain cover, a few men place themselves in a circle on trees or rocks, so as to command the directions, it is probable, he will take towards his usual haunts. As the creature in stealing through the cover comes near the first of these

sentinels, the man gives a slight cough, or a blow with his axe on a tree, or some indication that he is there, so as to attract the tiger's attention without alarming him. The animal turns from the unseen danger or trouble, and ere long comes upon some other looker out, who repeats the performance and so on until the beast fairly puzzled, but not alarmed, settles himself for the day in some cool ravine or shady bush. Once thus marked down tidings are sent into camp, and the sportsman starts almost certain of finding his game. After all, a few cool frogs should on a hot day be as refreshing to a tiger as an ice would be to the man who starts in pursuit of him.

The same sportsman, who has had more experience both with spear or rifle ; mounted or on foot than any other of my acquaintance, told, that he knew of one instance of bears eating carrion. In this case it was the body of a bullock that had been killed by a tiger, which, with the tigress and a cub he shot. On visiting the spot the following day, he found that the carcass of the bullock had been pulled to pieces and devoured by a couple of large bears, which, quite gorged with their repast, he put out of a bush close to the spot.

It is well known that wild hog will eat carrion.

No. 20.—Felis Pardus.

Jerdon, No. 105, page 97 ; The Panther.

I cannot help thinking that there is only one species of panther, leopard, or pard, whatever the proper name may be, and that the varieties in color, shape, and size are accidental, or caused by climate or diet. I believe that a black cub has been found in a litter, the rest of which were of the usual color. The three or four specimens of the black panther I have seen, have always struck me as being of a glossy, not as Jerdon has it, of "a dull black color." Vide page 100 of his book.

The specimen sent from Bangalore in 1867 (last year) and now in England, a portrait of which is in the *Illustrated London News* of the 8th February 1868, page 136, and the one now, August 1868,

in the People's Park in Madras, although they appeared alike in color and spots as far as the latter could be seen in particular lights, differed much in size, and, as it appeared to me, in the shape of the head, I fancied that the smaller, and far more savage animal, that in Madras, had a shorter and rounder skull than the other. This smaller panther was, I believe, sent to the People's Park, by H. H. the Rajah of Travancore.

I saw in Bangalore the skin of a panther, shot near Hyderabad in the Deccan, that had, besides being rather darker than usual, a large dark patch on the side, that included several spots, a large blot or stain in fact.

At Nellicondah near Hyderabad in the Deccan, I saw, just at dawn, an immense panther, with what I thought was a dog in her mouth, she dropped it on my shot, which slightly damaged her, (it proved to be the neck and fore-quarters of a bullock) and rushed up the large hill of Nellicondah into a cave in the rocks about 300 yards from where I was. From my post at the other side of a small valley, I could perfectly see the path she had taken, although it would not have been of any use firing again at her, as she was gliding under stone or bush. As I was following her, I startled a bear, like the panther, returning home ; it ran into the same cave, of which it was, I imagine, the rightful tenant ; a prodigious row ensued, in which the bear evidently got worsted—for it came out incontinently tail first, and shuffled off at best speed and in very bad temper. To get to this den, I had to undergo almost the greatest trial my nerves have ever been put to.

Both animals passed through a cavern-like passage, evidently a highway under a rock, six or eight feet high, as many broad, and perhaps three times that in length ; in the midst was a wild bee's nest, an inverted cone hanging down from some point of the roof to far less than my height from the ground ; the bees seemed good tempered however, so remembering that, the panther had just passed once, and the bear twice, without disturbing them, I plucked up courage and crawled under the awful cluster. The panther at that critical moment came out of the den just above with an angry roar, I could not see her, but thought it probable that she would

take the same path which she and the bear had just used, in which case we should have met in the narrow passage under the swarm; her I did not dread her, but I certainly did fear the bees.

I cannot without some demur accept the assertion, page 100 of Jerdon, that they avoid "wetting their feet." All cats to a greater or less degree dislike water, but I do not think that panthers avoid crossing small streams or damp ground. In our early days at Tounghoo in Burmah, a panther every night visited the slaughter shed, at the angle of the old fort, and I have often traced it and a tiger along a path which ran over what is now the cantonment parade and on which both often were over their paws in water and mud. I met the panther once, face to face; and as he stopped to have a good look at me, I have no doubt as to his not being a tiger cub, as might otherwise have been supposed.

Again the first large beast I tried my gun on, was a trapped panther, which in youthful folly some of us wanted to try to spear from horseback*—the Commandant wisely prohibited this, so the trap was placed in a duck punt, which from a small boat, in which were some ill armed and very bad shots, was towed into a lake near the cantonment. The trap being opened and a charge of snipe shot from a very safe distance being fired at it, Leopardus came forth; and after a calm survey, leisurely took to the water and swam towards the land where it was covered with children and followers who had turned out to see the fun; we gave chase as fast as we could row: on finding himself pursued, he turned back and swam a splendid charge at the boat, being missed freely in his course, and being only settled by a lucky shot in the head and a timely spear thrust as he was in the act of getting into the little boat.

* I trust I may not be supposed to mean, that, a fair rider and spearsman on a bold and clever horse should not try such a feat. I have never performed it, but I would back a good man and horse against even an untrapped panther. In this case few of us had ever handled a spear. Once while beating for hog, an excellent spearsman and I were, by an outcry that a tiger had broken covert, beguiled into galloping at an animal which we hoped was a panther but which proved to be a hyæna—this we gave up and returned in time each to win a spear at hog—but, knowing the horses, I think that had the quarry been a panther the odds were in our favor—VAGRANT.

Lastly in August, when the Kistnah river is very full, I was on field service from Hyderabad towards Cuddapah ; we marched south of the old town of Daiwarcondah by a route troops had not before been, and crossed the river at a place, name forgotten, where the then mighty stream, narrowed between two mountains, wooded to the water's edge, rushed like a sluice, so much so, that, out of several elephants we had in camp, only two could be got across. I was with a brother officer, sent at daylight the following morning to see the baggage brought over. We were within fifty yards of each other and waiting for the basket boats to cross from the opposite side, when his attention was attracted by a round object, which he at first took for a cocoanut, coming nearly directly over through the floating sticks, &c., which after a "*fresh*," cover an Indian river ; it came near and proved to be the head of a fine panther which, landing close to the spot he stood on, got at once into the densely-wooded hill which ran down to within a few yards of the the water—and was only separated from it by a bullock track. On hearing his shout, I ran towards the spot, not in time to see the animal, but to see the water filling the fresh foot prints it had left in the mud on landing. Even had we not been on duty, following the panther would have been impossible, but I pushed across at once and, on examining the opposite bank, found not only the traces where the beast had on *this* occasion taken the water, but where it had done so on several previous days at various distances up and down the bank. I do not think it could on this occasion have been carried down much more than one hundred yards. That the force of the stream was great, the simple fact of only two elephants crossing will vouch, and a glance at the map will show that the Kistnah about sixty or eighty miles after it receives the Toongabudra near Kurnool is, in the month of August, and when narrowed by hills, a vast body of water for man or beast to cope with.

The panther appeared on each occasion to have entered the water from a large field of high millet. "Soorghum," the "jowari" of the Northern and "cholum" of the Southern districts of the Madras Presidency, which extended for some distance up the opposite bank on which, as well as for some yards into the field, his tracks on coming to and entering the river but not going from it

were distinctly traced not only by me but by several of my brother officers.

In justice to Blyth, I must mention that I have been told by the keepers at the Madras People's Park that the panthers there never LIE DOWN in the water. The magnificent tiger now there appears to spend the greater part of each day in his tub.

Any one who will watch a kitten at play can, from the way it conceals itself, form a fair idea of the difficulty in finding, still greater in shooting a panther among rocks. The instant the creature hears a footstep, or suspects that man or beast is approaching, he sinks down on the spot, leaving only his ears and eyes peering above a stone : if he thinks he is observed, down goes the head, perhaps to be cunningly put up again to see if there is still safety, but more likely when the man walks up to the spot his only view of the "Will o' the Wisp"-like beast is one short glimpse as it glides fast and silently as a snake through rock and bramble a long way off ; or, if it has been much frightened or enraged, a bolt, or rush, so headlong and rapid that merely the sharpest of snap shots can be had at it.

Well may Blyth say, vide Jerdon, page 100. "The pard is a "particularly silent creature, very stealthy, and will contrive to "dodge and hide itself in places where it would appear impossible "that a creature of its size could find concealment."

Jerdon says at page 100, that "they are popularly said to be "much in the habit of climbing trees, but this habit does not seem "to have been much noticed by late observers." That they get into trees occasionally, there is no doubt : but I do not think that they often do so from choice, or that they climb to any great height, or unless when disturbed by dogs or beaters.

The trees (for instance, rhododendrons of the Neilgherries, or the bastard banyan, pepul, or burr, whatever the proper name may be, "ficus religiosa," is, I believe, the botanical one, of most other parts of this country) that grow about the sides of rocks, ravines, or hills in which panthers are generally found, often have gnarled and distorted trunks, which with their long, broad and mis-shapen limbs, extending nearly horizontally across a ravine, or parallel to some large stone or boulder and perhaps overgrown with moss, lichen, or

creeper, make admirable steps, bridges, ladders or short cuts of which man or beast, even dogs and goats, readily take advantage ; but unless to make use of them for these purposes, it is, I think, doubtful, whether undisturbed panthers resort to or climb trees.

Apropos of this, I may quote an extract of a letter I have, since I began to write this paper, received from a friend at Ootacamund:— " On Saturday week I was out with * * * beating for elk, and " the dogs started a panther. The shola* was not a large one, and " on her trying to leave the wood, a shot which did not hit her " turned her back, and there being sixteen dogs she thought it wise " to get out of their way, and accordingly took shelter in a tree from " the upper branches of which she was potted like a rook."

The same writer like many other Indian sportsman, makes a distinction between panthers and leopards, or as he calls the latter in the following extract from the same letter "*cheetas*," forgetting I think, that the latter name is, if I mistake not, only a corruption of the native term for spotted and refers to the single dot of the hunting leopard—F. Jubata.

" *Cheetul*," the native hunter's term, often used by English sportsmen, for spotted deer, axis maculatus, page 260 of Jerdon, is another instance of this :—

" The day before yesterday I saw a very large panther, when " watching for elk at a big shola on the Koondahs. I have invari- " ably found that they habitually frequent woods and are not found " near rocks and caves as is the cheeta ; one of the latter we killed " about a month ago near Maleemund while beating for hares on " rocky ground. The ground-color of the panther is a dark russet, " with the round spot on part of the body formed of four distinct " circles of black, with a clear patch left in the centre of the large " spot, whereas the cheeta has simply a black spot on a nearly white " ground. I have often met with panthers in dense jungle, but " never with cheetas ; they are much thicker and stronger than the " cheeta, and rarely exceed six feet six inches in length ; the one we " killed on Saturday was six feet three inches. In speaking of the " cheeta, I mean the one with retractile claws, not the hunting

* A Neilgherry sportsman's term for a copse or cover.—V.

"cheeta. I have seen a cheeta's skin which after tanning was nine "feet six inches in length; it may have been stretched but it did not "appear to have been much so."

My friend is a far better sportsman than I am; but with every regard for his opinion, I question whether the two animals he describes are distinct species. Difference of ground, climate and cover should, I argue, be sufficient reasons to cause difference in shape or color. The distinction he remarks in the shape of the spots in *pards* with *retractile claws,* I certainly have not remarked; of course, I mean in the true panther 'f. pardus' not "jubata."

If there be two varieties of panthers, the distinction exists I think, not so much in color or markings as in the shape of the skull which in the smaller and stouter animals has to me always appeared shorter and rounder or more bull-dog-like than in the larger. Mr. Walter Elliot, at pages 98 and 99 of Jerdon, mentions this difference of character in the skulls.

If I be right in my idea on this subject, perhaps my former remark at page 28 regarding the difference in the shape of the skulls of the small black panther, now in the People's Park at Madras, and the larger one sent from Bangalore to the Zoological Gardens, Regent's Park, may also be sound; and I may therefore be right in thinking: first, that black panthers are only a freak of nature; and secondly, that perhaps there is a difference in the shape of the head between larger and smaller pards.

If however black panthers are only accidental, it is odd that no one has yet come on a black specimen of one of the larger cats—f. "leo," or "tigris."

In corroboration of Jerdon's remark, page 100, that "like the "tiger, the leopard will, if hungry, eat any dead carcass he can "find." I may quote the following extract from the letter I have just mentioned:—"About a month ago I killed a nilgai in the "low country, and as it was late, I covered it up with branches; in "the morning I found it had been visited by a panther, which had "exerted a strength equal to more than six men; it had torn off "the hind quarter, tearing the haunch bone out of the socket. I "followed its tracks for more than a mile, the proof of its having

" the haunch in its mouth was the bloody marks on the grass and " shrubs against which it had been rubbed : during all that time, " although the weight of the haunch must have been at least half " that of the panther, he had never laid it down to rest. I lost his " tracks on stony ground."

No. 21.—Felis Uncia.

JERDON, NO. 106, PAGE 101 ; THE OUNCE.

Does not Plate 13 of the Felinæ in the Naturalist's library give a good idea of this leopard ?

It appears to me an admirable illustration of Jerdon's description of the animal which I have never seen.

No. 22.—Felis Viverrina.

JERDON, NO. 108, PAGE 103 ; LARGE TIGER CAT.

I shot a very fine specimen of this cat near Tounghoo in Burmah and had an equally good one brought alive to me at Rangoon ; it had just been caught in a trap baited with a fowl and was intensely savage.

I wanted to purchase the animal, but was out-bid by a rich China-man who intended to eat it ! The Burmans say that they kill goats and dogs also tame cats, and certainly either of the two just mentioned appeared to be powerful and fierce enough to warrant some faith being placed in their statements.

Jerdon says at page 103, that " the nassal bones are somewhat " attenuated, causing a narrowness of visage which has suggested " the names *viverrina* and *viverriceps*"—this peculiarity gives this cat a most malignant expression—to which " the fur coarse and " without any gloss," vide the same page, probably adds force. I have heard some sportsmen from the South of India, speak of a small cheetah or panther, that is often found in trees, that kills many monkeys and that is sometimes not much larger than a wild cat, may not it be identical with this cat ?

No. 23.—Felis Bengalensis.

JERDON, NO. 110, PAGE 105 ; LEOPARD CAT.

Although this beautiful wild cat is very bold and common in Burmah, I have never been able to shoot one. I have constantly seen them just before sunset close to Burmese villages and Phoonghee houses, (monasteries) and once saw one carry off a fowl nearly as large as itself; shaking it savagely meanwhile, and making a successful retreat in spite of the abuse, uproar and missiles which the theft caused.

The Burmese specimens of this species appeared to me to be smaller and more richly marked than two I saw last year, that had been brought from the Western Ghâts, or rather Jardine's Naturalist's library, Plate 20. "F. Bengalensis," to me appears more like the specimens I have seen in Burmah, while 19, Felis Javanensis reminds me more of the Indian cats.

No. 24.—Felis Torquata.

JERDON, NO. 114, PAGE 110 ; SPOTTED WILD CAT.

My dogs have often killed small wild cats, which much resembled the description given of this animal, and as Jerdon says, the figure given of "F. Servalina" in Jardine's "Naturalist's library," I always fancied however that they were hybrids between the domestic cat and some wild one, or the progeny of the domestic cat run wild.

No. 25.—Felis-chaus.

JERDON, NO. 115, PAGE 111 ; COMMON JUNGLE CAT.

The peculiar ear-tuft of this cat varies in length a good deal, perhaps with sex, age and season. The drawing in Jardine's "Naturalist's library," if it were of a darker and more jackal-like grey, would not give a bad idea of this animal—it stands very high on the leg, and I once laid greyhounds into one, that had been turned out of some grass by a terrier, thinking it was a jackal. They are very powerful animals, and one of them will give a couple of greyhounds far more trouble to kill it than a jackal would.

I have seen the dark stripes on the limbs, external as well as internal, and very conspicuous in some specimens, although in some cases they are hardly visible, while others have appeared to have the grey of a far more red or rather rufous tinge. Very nearly the same incident as that described by Jerdon at page 112 of his book, happened to me in the Deccan; just as I had shot a pea-fowl at the edge of a field, some "nilgai" took off my attention, and when a few minutes afterwards I went to pick up the bird I found it had been dragged into cover and partially eaten by a large "chaus," which, to my disgust, I missed with both barrels. I have killed several while beating for game, and on one occasion was charged most gallantly by one which while I was beating for quail, was turned out by some little dogs I had with me. I gave him a charge of No. 10 shot that could not have done him much harm: the dogs brought him to bay in a bush, and on my approach he charged me, head and tail up, quite regardless of them, and would, I imagine, have left his mark on my legs if I had not stopped him. I shot a very fine one in Burmah, which was standing in deep black mud, probably looking for crabs, or some of the water newts that are always about the edge of a Burmese creek. The most demoniacal cries I have ever heard, not excepting those of the "bhaloo," "kole," or "pheal jackal," whatever that mysterious animal may be, were attributed by some natives with me, to the love-making of a couple of these wild cats, with what truth I know not. I have never succeeded in rearing these cats, and I very much doubt whether the specimens I have seen in captivity, People's Park at Madras and Lall Baugh at Bangalore for instance, are not hybrids with the domestic cat. I am convinced that the two species interbreed to a greater or less extent—perhaps the degrees of relationship may be marked by the variety in color, or the length of the lynx-like ear tuft, or the size. I am sure that I have seen some of the "chaus"—cats almost as high on the leg and as heavy as an ordinary jackal.

I do not think that they are in the habit of climbing trees, I have certainly often found them in long grass far out in the open plain and from any tree in which they could have found shelter if pursued by dogs. The claw is, I think, more dog-like or resembling that of the hunting leopard (vide the Sketch at page 38) of these

notes, than the talons of other cats, therefore less adapted for climbing. The figure of the chaus which stands high on the leg as a dog or jackal does, and the gait and style of hunting of the animal, do not give me the idea of a creature that would get into a tree unless from necessity.

But this may be a mere fancy of mine, not worth the ink expended on it.

No. 26.—Felis Caracal.

JERDON, NO. 116, PAGE 113; THE RED LYNX.

There is now (September 1868) in the People's Park at Madras, a very fine specimen of the lynx, which in size and general appearance corresponds very nearly with F. Caracal as described in Jerdon and the "Naturalist's Library"—the color, however, is more a grey than "an unspotted vinous brown or bright fulvous brown" as Jerdon has it at page 113, while the tail, although "concolorous "with the body and tapering" has not the black tip he mentions—the "black spot where the moustaches grow and another above the "eye and the line down each side of the nose" of his animal are hardly perceptible in this, indeed if it had not been for his book, I should not have remarked them. The white spots above the eyes mentioned in the Naturalist's Library are wanting in the Madras animal, which has however "the end and edges of the "upper lip and the chin, pure white." The ears too are not quite as Jerdon describes them, but as the Naturalist's Library has it "the "base of the back of the ears, is of a deep shade of black, assum-"ing a greyer tint towards the tips, which are furnished with tufts "of long black hair." The animal, notwithstanding these slight variations, must I imagine be F. Caracal: it is certainly very handsome, perfectly gentle and much valued by the natives who attribute to it most marvellous hunting prowess. It was presented to the People's Park, by the Rajah of Karwait Nugger—but I cannot trace it further back. Can it be F. Isabellina of Blyth, page 113 of Jerdon—an animal, I have never seen nor had described to me. The native name "*siagosh*" black ear is their usual term for any lynx.

No. 27.—Felis Jubata.

JERDON, NO. 117, PAGE 114 ; THE HUNTING LEOPARD.

Every one who cares about such matters, knows that the hunting leopard runs down its prey by sheer speed as does a greyhound, instead of creeping up to it, as do the panther and all the other cats, but few are aware how wonderfully nature has provided for this style of hunting by giving this beautiful cat a canine foot, that is not damaged in the headlong rush it has to make over a hard and stony plain ; in place of the well-cushioned paws and deeply concealed talons that allow the rest of the feline tribe to get so noiselessly up to their prey. I do not think that the difference in shape between the only partially retractile and dog-like claw of this cat and the admirably protected talons of the other large varieties of the tribe has been clearly pointed out. The lithographs attached, are taken from photographs of the claws of very fine specimens of "F. pardus," and "F. jubata ;" the last was a very old male, and until I saw him I always fancied that the head and loins of the hunting leopard in Sir William Harris's beautiful Plates of South African animals, were too small. This specimen was found in a small rocky hill close to my camp—the other was a very dark-colored and powerful panther which had killed one man and mortally wounded another in a charge through some beaters who had tried to mob him the day before he was slain.

I agree with Jerdon in disbelieving (vide page 116 of his book) the native ideas of the rush being made in one breath, and the paw being held over the horns of the buck.

The leopard always seizes the buck by the throat, after he has knocked the poor animal down and thus naturally holds the head firmly fixed against the ground with the horns as a lever. Without wishing in the least degree to question the wonderful speed of the leopard in his last rush, I think that the buck, just at the end of the run, when he sees all hope is lost, becomes so paralyzed with fear as to be incapable of exerting himself to the utmost. Every one who has an opportunity of seeing a hunting cheetah at work, should for once, at least, take advantage of it, for pursuer and pursued are, when in action, perhaps the most beautiful animals in

creation, but the chase (sport it is not) is despicable ; fit only for the false and effeminate natives of India.

When on his cart, a hunting leopard is generally in excellent temper, keeping up a constant purr and rubbing himself against any one who is near him much as a tame cat does at meal-times. Blyth's term for the cry of the cheetah, page 117 of Jerdon, "a bleat-like mew" reminds me of a sound once heard not to be forgotten, and although well known to sportsmen, not, I think, often mentioned ; the call at night of one tiger to another, it is, I think, more like the faint grunting "low" of a cow buffalo to her calf than any other noise I know and yet so distinct, not to say awful, that it is not to be mistaken.

The finest hunting leopard I have ever seen, belonged to the well known Rajah of Chicarry in Bundlekund. The keeper told me that he could run down four black bucks of a morning. I saw him without showing the slightest signs of being fatigued, kill two very fine bucks in the Rajah's preserve within a very short space of time. The last gave us what is I suppose in that description of hunting considered a very long run. He had a long start and was on the move when the leopard jumped off the cart on which we, (leopard, the keeper an old Mussalman, and I) were seated, and continued trotting quietly on, thus keeping the leopard who followed at a crouching run, and took advantage of every bit of cover that could screen him from view at a pretty sharp canter before he could get close enough perhaps within two hundred yards, to make the final rush, this once commenced the buck was run into with as much rapidity, in certainly less than four hundred yards, as if the leopard had started on better terms. The buck although he was nervous, did not of course see the leopard, or he would have been off at once. His enemy was two or three times inclined to give up the chase, having perhaps lost sight, but was encouraged to go on by a whistle from the old keeper who sat with me on the light cart which a couple of fast bullocks took along at a round trot. Of course, this could not have been done except in a preserve where the antelope were very tame and in great numbers. The leopard certainly was a very beautiful and perfectly gentle creature ; although he did look a rather formidable one when, excited by his

success and with face, jaws and foreparts literally dropping blood, a wooden bowl of which had been presented to him as a peace-offering when each buck was taken from him to have its throat cut in the orthodox Mussalman fashion, he sat on the cart with his face within a few inches of mine, and each jolt knocked our heads or bodies together. The odd mixture of feline purring and looks with dog-like sporting feeling, docility and manners this particular leopard displayed, astonished me very much. An excellent sportsman and keen observer has reminded me, that in closing with his quarry, a hunting leopard appears to upset a buck, by hooking or knocking the antelope's feet from under him, or aside with his paw. I think, that I have also remarked this cat like blow, but if it be used, the stroke is given with such rapidity that the eye can hardly follow it.

To those who have not seen antelope, the idea of witnessing from so slow a conveyance as a bullock cart, a race for life or death between the two fleetest animals we know of, must appear strange : but it should be remembered.

First, that the run is always a very short one, three or four hundred yards, perhaps at most a quarter of a mile.

Secondly, that the black buck generally brings up the rear of the herd or zenana over which he presides ; jealousy and dread that any of the ladies should elope, being I think his reasons, for no male animal of my acquaintance displays such an aggravating want of confidence in the female portion of his household, or such a dislike to his own sex as does a black buck. As with others this is unlucky for him in many ways, particularly where a hunting leopard is concerned, for not only is he thus pretty sure to be the last of a herd, but he is also from size, color and horns far more conspicuous than the rest and more likely to attract the attention of the leopard : when, on the small leathern hood which is fastened under his chin, somewhat forage-cap fashion, being slipped back from over his eyes to behind his ears, the beautiful beast stands up on the cart for a second to gaze about him, then, dropping off it like a snake, starts in pursuit.

Thirdly ; it should not be forgotten, that with very little man-

œuvring, a man who knows his work should almost always be able to get moderately close to a herd of antelope as they cross in a certain direction.

For instance ; a herd of antelope are moving quietly four hundred yards or so to the right of the cart which they take for some innocent one of every-day life. The cart is driven so as to hit on some place, practice and eye soon enable one to tell that pretty fairly, within leopard-eye range of which the rear of the herd will probably cross the line : antelope like sheep follow the leader very closely. So that, when the thin cord by which a leopard is nominally held is slipped from a small belt which encircles his loins, matters stand somewhat as the annexed diagram tries to explain, and the cart being driven *inside* of the probable line to be taken, the men who are being jolted along on it are nearly certain to have a fair view of start, course and finish.

The admirable sportsman just alluded to told me as a proof of the want of endurance of a hunting leopard, that he once, while mounted and looking for other game, came on one which he cut off from a hill it tried to reach ; for a short distance it out-paced his horse completely, but on his continuing to press it at the utmost speed of the Arab, it squatted in a small bush out of which it however sprang and made off on his attempting to spear it as the horse rushed past. It had, however, either lost wind or courage completely for he closed with it this second time and speared it without the least difficulty. It was a large male, and the skin which I have seen was in excellent order, with fur and mane very long.

No. 28.—Hyæna-striata.

JERDON, NO. 118, PAGE 118 ; STRIPED HYÆNA.

Is not the Teloogoo name here given for this animal a mistake ? As far as I can remember it is always called "*Doomool goondoo*" by Telingas in the Deccan, the Northern Circars, and the Ceded Districts. The term, I have heard, means bone-crusher. A hyæna, page 119 of Jerdon, gives a long run before he is speared, not from the speed of the animal, for he is easily overtaken by a good horse, but from the way the brute turns and doubles just as the spear glitters over his back.

In an article headed I think "Fanciful Realities," by "Stranger," in one of the early volumes of the *Indian Sporting Review* the rider is made to turn *from* instead of *with* the hyæna as it doubled ; the reason being that the beast always doubles in a figure of 8, therefore that the horse would meet him in the next turn ; I have never tried this, nor do I think I shall if I have another chance of spearing one of these animals. It is the most cowardly beast I know, and does not I think show so much fight as a pariah dog under similar circumstances would. Most of the hyænas I have seen in captivity have been exceedingly gentle ; one I remember that ran loose with some greyhounds of the owner's was fed almost entirely upon cocoanuts. I have often heard them accused of doing damage in sugar-cane fields, but with what truth I know not.

The most ludicrous instances of animal cowardice I have ever seen have been displayed by hyænas. Once while with two friends beating a hill for hog, a large hyæna broke past us ; in despair of more noble game we rode at and, after a long and fast run, I had slightly speared the ungainly beast ; hardly drawing blood and merely "ruffling the feathers" so to speak, when one of the other horses rolled over with his rider in the black cotton ground we were then crossing : the rider lost his rein, and the Arab, an old Kamptee hog-hunter, picked himself up and forthwith pursued the hyæna, whose abject fear and efforts to escape, as he shuffled along with tail between his legs and quarters more tucked in and drooped than ever, when the noble old horse bit at them, made him look the most miserable creature I have ever seen and a wonderful contrast to the old Arab, who, with ears laid well back and tail aloft, pursued the enemy at a long trot, every now and then trying to get it under one of his fore-feet.

Another case was nearly as illustrative of the faint-heartedness of the animal. Shortly after daybreak, I had shot a bear that died almost immediately ; ere long a large hyæna blundered up the same path the bear had taken. I did not wish to waste a shot on him, and he stumbled on for some distance in the vacant-looking and undecided way of his race ; suddenly having caught the scent of blood or dead flesh—he became a different and rather fine-looking creature, as he rushed, with head and tail well up, the latter waving

almost in the style of a foxhound while "drawing" direct to the spot, and in his hungry haste jumped on a stone beside which was the dead bear and almost on the carcass. All at once matters changed, and I shall not soon forget the horror-struck look of the hyæna as stiffened as if by magic, too frightened to move back or forward, and with every bristle erect like a worried cat, he stood quivering over the body : although I had spared it before I could not resist taking his worthless life as he stood.

That was a red letter day, one of those that reward an Indian sportsman for his numberless unrecorded blank excursions. Some one says of sport,

"All hits are history,"
"All misses are mystery,"

and even to see as little as is recorded in these notes, a man must undergo many a sore trial of mind and body, of temper and of the flesh.

The time was January ; the most delightful month everywhere in India. I left my friends' tents about three o'clock one cold morning and under a beautiful full moon, had a pleasant ride of eight or ten miles to my ground, which I had not long reached, before I got the bear and hyæna just mentioned, both fine specimens : within a couple of hours after, perhaps much less, I killed two more good bears, both of which gave me some trouble ; I then shot my way back to the tents, going for many miles along one of the salt marshes of the upper part of the Northern Circars and getting a large and very diversified bag of small game ; among them, my three first specimens of the flamingo, some red-crested pochards, a very beautiful teal,* which I have never seen before or since, and seeing what I think were specimens of the scaup pochard too wary to bag however, and winding up when near the tents with an antelope which notwithstanding a ball through his body, gave my active Deccanee galloway a long and uncommonly fast gallop before the spear-blade was blooded.

Before luncheon I got back to the tents which were furnished with all those luxurious comforts for which Indian Civilians of a few years ago were so famous.

* I think that this was the "*Clucking teal*," Querquedula glocitans, No. 966 of Jerdon's bi rds of India." Volume 2, page 808.—VAGRANT.

Eheu : it seems only yesterday ; but my dear host, a comrade in many a day's sport, and his young bride who was then with him, have both been dead for some years and their "vagrant" guest has rusted from a young Captain into a battered and weather-beaten field officer.

No. 29.—Vivverra-Zibetha.

JERDON, No. 119, PAGE 120 ; LARGE CIVET CAT.

The Burmese name for this civet cat, "*Horse-cat*" has reference to the erectile mane on the back. They grow to a great size and commit vast havoc when they get into a hen roost : one which I shot under my house at Toungboo was, without being unfairly stretched out, forty-six inches, nearly four feet in length, and had just killed seven of my finest fowls. I have killed others, I think quite as large.

No. 30.—Paradoxurus Musanga.

JERDON, No. 123, PAGE 126 ; COMMON TREE-CAT.

The "Toddy Cat," as it is often called, is accused, and I believe with justice, of doing great damage to vegetable gardens.

While in Rangoon I had a very fine one, perfectly gentle and very playful ; it was unfortunately allowed too much liberty and, one day having wandered to a neighbour's kitchen was killed by his cook and sold to a Chinese carpenter who intended to eat it.

No. 31.—Paradoxurus Grayi.

JERDON, No. 124, PAGE 128 ; THE HILL TREE CAT.

I can testify that there is in the Northern Circars an animal closely answering to this description and with the power, vide page 128 of Jerdon, of "exhaling when irritated, a most fetid stench by "the discharge of a thin fluid." One beautiful moonlight night on my return from mess at Russelcondah, I found some of my dogs much excited about a large creature evidently of the paradoxus family which they had, I suppose, hunted into a cork tree in my garden.

The tree was not a large one, and in the bright moonlight I could see the cat perfectly, but as there was a sick lady in the next house I did not like to cause disturbance by shooting it, and therefore sent an attendant on all my sporting excursions of that period, a hardy Ooriah, whom I knew to be proof against most assaults from wild beasts, up the tree to dislodge the animal, which, I, armed with a stout stick and aided by the dogs, was to receive when it descended to the ground.

It did not appear to notice his approach until he got almost within arm's length ; in fact he had just called out that it must have been some tame creature : when he uttered an acute shriek of mingled horror and rage as he was suddenly sprinkled all over with some detestable fluid it discharged at him ; so keenly fetid, as to disable him from using hand or eye and to cover the retreat of the beast, as it bolted down the tree past me and through the dogs, by driving me back in discomfort and preventing them, three or four active, eager and hardy terriers and spaniels from closing with it.

What the animal was, I know not, but from Jerdon's description I imagine it must have been this variety of paradoxurus ; I am certain that the stench was vile and abominable beyond any other, I have had the ill fortune to experience, and that by it I believe the beast saved his life.

No. 32.—Arctictis-binturong.

JERDON, NO. 126, PAGE 130 ; THE BEAR CAT—BINTURONG.

The only binturong I have seen, was a tame specimen in the possession of an officer at Rangoon—if disturbed during the day it was very surly—but in the morning and evening was generally playful and good-tempered, moving with a good deal of activity about its post and perch and making great use of the prehensile tail while doing so ; I have never however seen it trust itself entirely to this extraordinary appendage, although it made use of it much as if it were a fifth limb.

No. 33.—Canis Pallipes.

JERDON, NO. 135, PAGE 140 ; THE INDIAN WOLF.

In corroboration of Mr. Elliot's remark, vide page 140 of

Jerdon, that "it is a common belief of the Ryots that in the open "plains where there is no cover or concealment wolves scrape a hole "in the earth in which one of the pack lies down and remains hid, "while the others drive the herd of antelope over him." I have been told by the same keen and renowned sportsman who gave me the information about bears eating carrion, and the account of his having speared a hunting leopard, vide pages 27 and 41 of these notes, that on one occasion having got in front of a herd of antelope that were feeding and coming gradually towards him : he waited for some time, until they were within rifle range when he shot one of them. Suddenly no less than three large wolves roused by the report sprang up from the open plain between him and the herd—which of course went off at full speed while the wolves trotted quietly away. He could not see whether the wolves had any confederates behind the antelope but he thought they had not. On examining the spot, where each wolf had been concealed, he found that each had been in a hole, freshly scraped in the bare plain, in which it continued to hide itself so perfectly, that he had passed within a few paces of each of them, without being aware that it was there : another moment would, he said, have brought the leading females of the herd up to the ambush. Apropos of this, I may mention that at Nursipatam, I remarked a couple of jackals prowling close to my hut—one of them suddenly squatted flat in a small hollow while the other strolled on ; presently an outcry among my poultry attracted my attention, and I saw the second jackal deliberately drive some of my fowls from beneath a country cart where they were taking shelter from rain towards the first, who, with head and ears laid close to the ground, was eagerly watching the proceedings. —I interfered of course.

Wolves vary a good deal in color and length of hair, probably with season and climate. I have seen some a light reddish grey, and others much darker than any jackal. Near Hyderabad in the Deccan, a brother officer and I, both of us then young and light weights, rode our horses, fair Arabs, to a stand-still after a large wolf, with very long hair, and to use his words, "nearly as red as an Irish setter."

In this case the ground, black cotton soil full of holes, was in favor of the wolf, but I do not believe that a wolf, unless gorged,

has often been fairly ridden down. I have never succeeded in getting within spear's length of one, even under very favorable circumstances. I was beaten after a run of four miles over unexceptionable ground, and when riding under eleven stone four pounds, saddle and spear included, on a powerful Arab just out of training and the winner not long before of some good races at Bombay, by a gaunt grey brute, that lobbed along hardly four horses' length in front of me the entire distance, a good example of:

> "The wolf's long gallop that can tire"
> "The hound's deep hate and hunter's fire."

I did not press him at first however as from all I have since seen or heard of riding at wild animals I believe I should have done in this case. I had an excellent start, "a *fair field*;" to wit the plain between the Native Cavalry lines at Bowenpilly, near Secunderabad, and Bolarum the Cantonment of the Nizam's troops and "*no favor*." I was light and young: and in those days as far as riding goes, now that I am old and shattered, I may say, as do Scotch women of their children,

> "For one better you might find ten worse;"

but, be this as it may, I was very handsomely beaten from start to finish.

Are the wolf like dogs often seen about villages, hybrids or merely a slight remove, from the original type? Close to the ground I have just mentioned, I once laid my greyhounds into one of these animals, thinking he was a large jackal, and when they were worrying him, that he was a young wolf, and not finding out, until I saw the brand of a firing iron on his flank that he must once have belonged to some one. All natives of India place much faith in the actual cautery as a remedy for almost any disease. The more barbarously deep and wantonly fantastic, the better. When hurt themselves they are apt to make an outcry and invoke sympathy, but for pain in others or in animals, they have not the faintest consideration. The worst of all are the "*Aristocracy*," as I have heard the holy men termed, of the far-famed "*mild Hindoo*."

Judging from the numbers of wolf and jackal-like dogs that are from time to time seen, near Indian villages, I imagine that, the tame and wild races, interbreed more readily than is generally

supposed. In some notes on the "Hybrid races produced between "the dog and some of the wild canines," signed "Curricle" and published at page 252, volume VI, of the *Indian Sporting Review*, September to December 1847, the writer mentions, that he received from Dr. Jameson, Superintendent of the Botanical Garden at Saharunpore, a hybrid, the produce of a tame female wolf which had bred with a pointer dog. This hybrid died when 20 months old, is said to have been mild and gentle, its howl to have had more of the bark in it, than the cry of the hybrid jackal, and to have had a much closer resemblance to the dog in appearance and disposition than the hybrid jackal presented, and judging from this cross that writer considered the wolf to be much more nearly allied to the dog than is the jackal.

He also mentions some further experiments in which he succeeded in obtaining hybrids as follows :—

"First cross—Hybrid between a female jackal, and Scotch terrier "dog, or half-jackal and half-dog. Second cross—Between the "hybrid jackal and terrier, or quarter jackal and three-quarters dog. "Third cross—Between the quarter jackal and terrier or seven-"eighths dog and one-eighth jackal"—of the five pups composing the litter, of which this last was one, two were fawn-colored and very like pariahs, while three had "the precise livery of the jackal ;" noses, sharp and pointed ; ears, large and erect ; head and muzzle like the jackal. It is as "Curricle," remarks "a point of some "interest to note, that the ears, in this the third removed from the "jackal are still erect and pointed." This cross, he remarks, appeared to have gone back a generation, and to have resembled the jackal much more than their mother whose appearance, with the exception of the very sharp muzzle, although she had, so much jackal blood, was that of a sleek well-fed pariah dog, color, yellow fawn, but her gait and gallop were precisely that of the jackal.

"Curricle" remarks further that the half-wolf just mentioned "except in a few peculiarities which would escape most observers, "exactly resembled the coarse black pariah to be seen about "Loodiana and Ferozepore." In this instance the black color doubtless came from the pointer sire. It would be interesting to know what the colors of the rest of the litter were. The creature,

my dogs, ran into as mentioned at page 47, certainly was so like a wolf that I am not even now prepared to say he was not one. His want of speed and the ease with which he was overtaken made me at first suppose he was an over-gorged and gigantic jackal, when he was caught, I fancied he was a wolf until the brands on the flanks made me think he was a hybrid, the property of some villager, and I called my dogs off accordingly.

I often visited the spot again, but could neither in the plain nor in the villages near, hear of, or see him.

I do not think that I have ever heard the voice of a wolf; the other canines appear to be very noisy; the detestable yell of a jackal is known to every one who has been in an Indian cantonment; while the sharp cheerful bark of the game little fox may often be heard in the evening and sometimes during the night on almost any plain from which they have not been banished by tank-diggers and other poachers.

No. 34.—Canis Aureus.

JERDON, NO. 136, PAGE 142; THE JACKAL.

Adverting to the black variety mentioned at page 142 of Jerdon, I find in "N. Bailey's Dictionary, 20th edition, 1,770;" "Jackall," a "black shag-haired beast which hunts out for the prey of the "Lion."

I have never during nine years passed in that country, heard of a jackal having been found in *Lower* Burmah. They are to be found however, but are not, I believe, at all common about "Thyetmyo" and other stations on the Irrawaddy.

Whatever the cry of the "Bhalu" or "Kole," or "Phealall," jackal may be caused by, the sound is as unearthly and melancholy a wail as any man need hear. Although it is mentioned by Mr. Elliot and apparently accepted in good faith by so good an authority as Lieutenant Rice, page 143 of Jerdon, I do not believe the native legend that it is the cry of an old or worn-out jackal accompanying a tiger to pick up a share of the spoil; for jackals

are to be found in every part of the country, close to cantonments near to which tigers have not been for years; and if the peculiar wail be caused by old age, it should be more often heard in cantonment than in camp. Like other sportsmen, I have never heard this unearthly yell, unless when I knew, or had reason to believe, that a tiger was on foot and have more than once seen a jackal sneaking about apparently interested in the movements of a tiger; but I cannot account for the cry. Are we sure that it does proceed from a jackal? May it not be some signal, or call, or caterwaul of a tiger in person? No one, until he heard it would suppose that a tiger could utter a sound so unlike a roar as the cry mentioned in the remarks on the hunting leopard, page 39 of these notes. I do not attribute much weight to the instance given at page 144 of Jerdon, of a jackal and cheeta being turned out of the same bush. I once aided in killing a panther that got out of the same bush, and at the same moment, a hare did. Both of the animals must have been there for some time, for it was at the end of a hard morning's work; and my two comrades, the beaters and I, had all been resting about the spot as we came up, and all the guns except mine had been made over to the attendants;—suddenly a couple of pariah dogs coming up with a beater went into the bush, the panther and hare forthwith jumped out of it at different angles, the former losing his life in the proceeding. These two creatures certainly could not have had any interest in common.

In support of the statement at page 142 of Jerdon, I may mention that one of my brother officers saw a wounded antelope that he was following up, coursed and killed by a couple of jackals.

Opinions differ regarding the speed of a jackal. My own evidence would be that, if gorged, as he often is in the morning, and if he has not got a long start of the dogs any strong greyhounds will run into him almost immediately; and that as they are then not blown, they kill him with ease.

If however he be empty and has so long a start that the dogs get somewhat out of wind before they overtake him and therefore hesitate to close with him, he will give a very long run before he is stopped.

I have heard of jackals having been ridden down by a single

horseman, but I have never seen this done, although I have known several instances of both jackals and foxes having been ridden down by horsemen after the dogs had been thrown out, but the animals had been more or less tired previously. One morning, seeing a jackal limping about on three legs, I galloped after him expecting that he would become an easy prey. He soon put his fourth leg down however and did not give me a chance of closing with him. It must be explained that I was then riding a stout Persian, neither fast nor clever.

Apropos of this I see that Shaw in his Zoology published in 1800, writes as follows regarding the hyæna ; the extract should have been entered in my notes on that animal :—

" A remarkable particularity in the hyæna, but which is some-
" times observed in dogs, &c., is, that when it is first dislodged from
" cover, or obliged to run, it always appears lame for a consider-
" able space, and that sometimes to such a degree, according to Mr.
" Bruce, as to make the spectator suppose one of the hind legs to
" be broken ; but after running some time, this affection goes off
" and he runs swiftly away."

No. 35.—Cuon Rutilans.

JERDON, NO. 137, PAGE 145 ; THE WILD DOG.

Surely it would be better to have entered this creature as "canis ;" slight distinctions in nomenclature startle and dishearten many men who would otherwise have taken an interest in natural history and afforded information picked up from personal observation.

My own experience makes me think, that there is only one race of wild dog in India, and that the Burmese animal is identical with it, and that the differences in size and length of hair are only caused by season, and the brushwood the animals have to work through : both varieties have appeared to me about the same size ; females of course being smaller than the males, some were long, light, and lean-looking with short red hair and badly furnished tails, others were brighter colored with long hair and black or dark

muzzles and tips to the tails, and thus altogether appeared heavier animals. These differences were, I imagine, only the effects of hot or cold weather, deep well-shaded forest or brushwood full of thorns—burrs, or rough prickly grass, not of race.

There is a very healthy and upwards of three years' old specimen now in the People's Park at Madras, sent by me from Burmah, and presented to that Institution. She answers exactly to the following description given by Mr. Hodson at page 147 of Jerdon, except in her height which cannot be more than 17 or 18 inches. This may be accounted for by her sex, and having been very ill as a puppy ; Mr. Hodson, as quoted by Jerdon, says :—

"The *Buansu* is in size midway between the wolf and the "jackal, being 2½ feet long to root of tail, and 21 inches in average "height. It is a slouching, uncompact, long, lank animal, with all "the marks of uncultivation about it, best assimilated in its general "aspect to the jackal, but with something inexpressibly but genu-"inely canine in its physiognomy. It has a broad flat head and "sharp visage, large erect ears, a chest not broad nor deep ; a "shallow compressed barrel, somewhat strained at the loin ; long "heavy limbs ; broad spreading feet, and a very bushy tail of "moderate length, straight, and carried low. It stands rather "lower before than behind, with the neck in the line of the body, "the head unelevated, the nose pointed directly forwards, the fore "limbs straightened, the hind stooping ; the back inclined to arch, "especially over the croup, and the tail pendulous. In action the "tail is slightly raised, but never so high as the horizontal line. "Though the *Buansu* be not deficient in speed or power of leap-"ing, yet his motions all appear to be heavy, owing to their mea-"sured uniformity. He runs in a lobbing long canter, is unapt at "the double, and upon the whole, is somewhat less agile and speedy "than the jackal, very much so than the fox."

I have never attempted to give a description of any animal : as I fancied that all men who care for Indian natural history would certainly have Jerdon's book, on which my notes have been grafted, or that they would know enough about any animal I have mensioned to make one from me unnecessary, but as the wild dog is to very little known, I cannot do better than to depart from my

usual rule and to extract Jerdon's description which is at page 145, as follows :—

"THE WILD DOG."

"*Description*—General color : bright, rusty, red or rufous fawn-"color, paler beneath ; ears erect, rather large, somewhat rounded at "the tip ; tail moderately brushed reaching to the heels, usually tipped "blackish ; limbs strong ; body lengthened. Length—head and body "32 to 36 inches ; tail about 16 inches ; height 17 to 20 inches."

But to return to my specimen of the wild dog "Evangeline," as she is named, is certainly, although an interesting and rare creature to have in a Museum or wild-beast show, the most snarling, ill-mannered and detestable beast I have ever owned. I have heard of, but never seen, several cases of these animals running into deer and wild hog, once of a buffalo having been killed by them.

The excellent sportsman before mentioned, who gave me so much information about tigers on the Neilgherry Hills tells me that he thinks they run mute, giving as his reason for this opinion an account of a chase he once saw when five wild dogs were trying to run into two samber ; he said that they worked most systematically two below, two behind, and one above the line of the deer, which took them through several "sholas" as the hanging woods, and copses on these hills are generally termed—gradually, all the dogs, except two fell off, a proof he inferred, and I think fairly, that those on the scent ran mute, otherwise the rest of the pack would have come to the cry.

It is odd that the extraordinary stratagem mentioned at page 147 of Jerdon, should have been so widely believed. Williamson says in his "Oriental Field Sports," that they thus kill tigers—the natives of Burmah believe that they use it to destroy wild elephants ; and Doctor John Fryer in his account of East India and Bombain, mentions amongst the "Wild Beast frequent there, are Wild Dogs, "which they say thus Put out the Eyes of Venison as they feed in "the Woods, and so Venom them that they become their Prey."

Williamson says that, having damped with the poison their tails which they whisk in the eyes of the tiger until he is blinded, they rush on him in a body and so destroy him ! He devotes to this subject one of the Plates in his work just quoted.

I fancy that, with almost all the other small beasts of prey, wild dogs are often reduced to a vegetable diet.* "Evangeline," the one just noticed, although following her savage tastes she would not notice cook'd meat, would literally graze upon green food, herbs, grass and leaves of various kinds, as greedily as one of the herbivorous animals would—not as dogs do when ill, but evidently with a keen relish. She was once, when a few months old and confined to her cage apparently on the point of death. In despair of any other remedy, I had her set at partial liberty, *i. e.*, fastened by several long dog-chains linked together so as to allow her to move about a small clump of rank Burmese herbage near my house. The delight of the poor creature at being able to get at vegetable diet was very striking, and the change appeared to cure her at once.

The natives of the Deccan are very much afraid of these animals. Once while stalking nilgai, I came on a small pack of wild dogs, probably employed in the same pursuit, and was in the very act of firing at their leader, when my arm was pulled down by my guide, who trembling with fear implored me not to shoot, as he said animals which did not hesitate to attack tigers would certainly kill us if we molested any of their party. The result was that his interference caused me to lose my shot either at dog or nilgai.

Since the above notes were written, poor "Evangeline" has been transferred from a cage in the People's Park to a case in the Madras Museum, where her well-embalmed remains are to be seen, under these circumstances "nil nisi bonum" of her—she had, like all of us, many failings, but she certainly was a rare, valuable and interesting specimen—and one that should have been sent to the Regent's Park. She must have been nearly four years old when she died, and perfectly savage until the last.

In some notes by "Curricle," at page 257, volume VI, of the *Indian Sporting Review*, the writer mentions that he had attempted without success to tame a couple of these dogs, which although very young died in a month. He alludes also to their most offensive odour, worse, he says, than either that of fox or jackal.

* I find in the "*Neilgherries and their inhabitants*," by Mr. Metz of the German Mission, the following Bodaga proverb, which, as these wild tribes are good authority in such matters, may corroborate my remark, "*If a tiger is hungry, he will at last eat grass.*"—VAGRANT.

No. 36.—Vulpes Bengalensis.

JERDON, No. 138, PAGE 149 ; INDIAN FOX.

This game and beautiful little creature is perhaps the most graceful of all the small animals in India. It varies much not only in color but also in speed, in different localities, a fox found on red soil where food is probably not easily procured, will always give a better run although he is seldom so handsome, large or well furnished with a brush as one that lives on black cotton soil. The foxes too, found about the grassy plains, between backwaters, and the sea, are generally very fit to run and give an excellent course with Arab or half-English dogs. I have, like Jerdon, page 150, seen one hunting quail, have often seen them with all sorts of other animals and insectivorous birds, busy at a white ant's nest during flight time and once near Hyderabad in the Deccan saw one springing out of the grass and catching moth after moth as they passed him just before dusk—much in the way a tame cat does on a summer's evening in England. I have never observed cats in India do this.

It is a sad pity that this beautiful and game little beast of chase is not preserved ; it is rapidly becoming scarce all over India—not only from fair and *unfair* hunting, but because tank-diggers and some of the wandering races of the country eat one whenever they have a chance of digging it out. I once near Hyderabad, in the Deccan, killed a silvery grey (or almost white in some parts) fox with very short fur, and hardly any black tip to his brush which was very thin. I at first thought when I laid the dogs into him that he might have been white from age ; but he proved that he had full use of his legs and wind—could he have been a hybrid with No. 139, "the desert fox ?" page 151 of Jerdon, or is that variety found so far south ?

Foxes are wonderfully quick in taking advantage of ground in their efforts to escape from greyhounds. If a ravine is at right angles to their line, they are almost sure to race direct for it, then to drop into, and run up or down it for some distance, while the dogs having taken it in their stride, are staring helplessly about. I have seen them squat quite flat in any small tuft of grass or bushes

that could, for a second, hide them from the view of the dogs ; and I was once beaten by a tired fox, that deliberately, when I thought I was sure of him, ran into a herd of cattle and sheep and turned among and under them until, having completely fatigued and puzzled the dogs, he was able to run clear away from them ; this was one of the red earth foxes just mentioned.

To the assistance of a fox, I owe getting a wounded antelope, which I had lost sight of, as I was following it up. Although I felt certain that it could not be far on, I had just given up the pursuit, as I was travelling and pressed for time, when I was induced to resume it by seeing a little fox that had for some time been strolling about a rising ground near me, suddenly and without any apparent cause, change its direction, and trot up to a bush into which it stood peering with some interest.

In spite of the hardly suppressed jeers of the palankeen bearers, for by that conveyance was I then journeying, I went up to the spot ; and as I expected, turned out and bagged my wounded antelope which gave me an easy shot as it tried to hobble away. What, except feminine curiosity, for it was a vixen, made so small a creature, interest itself in the matter, is beyond my knowledge.

Jerdon's description of the way in which this beautiful little animal carries his bushy brush, is excellent : he says at page 149, that "it is usually carried trailing when the fox is going slowly or hunt-"ing for food, horizontal when running ; and raised almost erect "when making a sudden turn."

Indian foxes are very easily tamed, and I have often wondered why these very graceful little creatures are not made pets of, oftener ; for they are, I think, free from the offensive odour of the rest of their kind, and their delicately-tinted grey jackets and bright game appearance must please every one. I cannot imagine that, vide page 150—they are likely to go mad. Confinement to all wild animals must at the period for sexual intercourse, make them more than usually ill-tempered or excited ; (deer of all kinds for example) and probably under these circumstances, foxes may suffer more or look wilder than dogs and be set down as being mad in consequence. I know that this was the case with a tame jackal I had.

As enemies to insects, rats, &c., foxes are well worth preserving; they may occasionally eat a melon which they find in an unprotected garden, or a mango which has been knocked off a tree by their detestable namesakes the "flying fox," but beyond this I do not think they destroy vegetables, and certainly the little harm they could do to the husbandman, is far more than repaid by the number of his foes they slay.

Since the above notes were first printed, the same friend from whose letter, on the habits of the panther, I have made the extracts entered at pages 32 and 33, has kindly given me the following very pleasing account of two tame foxes in his possession. I feel sure that it will interest those, who like the writer, are fond, not only of field sports, but of natural history. That both of these tastes go hand in hand; many Indian sportsmen could, if they only would, afford most valuable proof. My friend writes:—

"At Vizianagram* my horse-keeper got a couple of young foxes, "not so large as the common rat, from a tank-digger who had dug "them out of an earth. They throve very well and were always "as tame as dogs. The male took up his quarters under a chest of "drawers in my bed-room, where he remained all day, but at night "he was generally out feeding; the female was not so sociable, but "lay in a cool hollow which she had scraped under the garden "hedge. They attained their full size about the eighth month. "They always fed with the greyhounds, and after they had eaten "all the meat that was in their own dish, they would often get "under one of the dogs from behind and, when he raised his head, "spring between his fore legs and, in going over the dish, pick out "a bit of meat and make off with it. In doing this their movements "were so quick, that the dog could never catch, although he invariably made a savage snap at, the nimble thief. They always "came to my call; and at breakfast the male usually sat on my knee, "looking out for scraps. I think that during the night they were "in the habit of going to a great distance; as one morning, while I "was taking an early ride, I saw one of them at the race course, "going home in a great hurry as if he thought he was out rather

* A small Military Station in the Northern Circars.—V.

" late ; but as a general rule, on getting up I found my little pet " under the drawers. They were wonderful ratters and quite equal " to a cat in the rapidity of their movements, invariably running off " with the rat to eat. I sometimes took them to the parade ground " and slipped a couple of greyhounds after them. They never ran " far, as when tired they lay down on their backs, and were at once " recognised by the dogs ; on one of these occasions one fox was " tired before the other ; and after he had made friends with the dogs, " he joined them in the chase after the other. They used of an " evening to play about on the lawn in front of the house, and the " activity they then displayed was most astonishing, and I have " often noticed them bounding, as does an antelope, without bending " their legs in the least. Like all such pets they came to a sad end. " The band-master's dog broke the back of one, and the other I took " on the march with me to Secunderabad. My patternman* who " was a heavy fat man was carrying it in his arms and caressing it, " when his foot caught in a tent-rope and he fell with all his weight " on the top of the little animal. It ran into a field of high cholum " and was so hurt and frightened that we could not find it and as " the regiment marched before daylight the following morning it " was never recovered. I never remarked any disagreeable smell " from them. In their habits they were very cleanly."

A tame jackal I had for nearly eighteen months was nearly as familiar, as good a rat-killer, and in many other habits resembled these foxes. She would, without the least hesitation, try to turn a strange dog out of the part of my garden in which she elected to dwell, and from which she would always come to my call or whistle : but she could never divest herself of the sneaking, thievish and suspicious manners of her race, and could therefore never have been nearly as interesting a pet as either of my friends' little grey foxes must have been.

No. 37.—Cetacea.

JERDON, PAGE 155 ; THE WHALE TRIBE.

My only sporting experience with these animals was on the

* An Anglo-Indian term for a "bâtman" or soldier servant.—VAGRANT.

Chilka lake, where I put a No. 6 or $2\frac{1}{4}$ oz. ball into the side of a large porpoise that was rolling along close to my canoe. The poor beast appeared very hard hit and probably died, but of course, I did not get him—and it was a cruel and wanton shot, of which I am ashamed.

Was he the "black Dolphin," No. 142, page 157, or the "Ca'ing "whale," No. 146, page 160 of Jerdon? It must be remembered that the Chilka lake opens into the sea, is salt or at any rate brackish water; and that he was one of a large shoal that were rising all round me: as far I could judge, he was much too large to have been "Delphinus perniger."

No. 38.—Sciurus Maximus, Sciurus Macruroides.

JERDON, No. 149, PAGE 166; AND No. 151, PAGE 168.—CENTRAL INDIAN RED SQUIRREL—BLACK HILL SQUIRREL.

I have been assured by a brother sportsman, that these gigantic squirrels are excellent eating and that soup made from them surpasses English hare.

The red squirrel, No. 149 of Jerdon, is very abundant in the forests of Goomsoor, also in those of the Golcondah Zemindary: this variety to me always appeared more shy and perhaps more active than the black hill squirrel, No. 151 of Jerdon. Near Tounghoo in Burmah, we constantly found the last variety during the heat of the day asleep in some tall clump of bamboo on which they did not appear to take any pains to conceal themselves: or they would if disturbed, force themselves into notice by a loud quickly repeated cry which, as is mentioned at page 167 of Jerdon, "Sykes "syllabizes" as "*chook—chook—chook.*" They become very tame, but are very destructive to furniture if allowed perfect liberty, and are apt to become mangy if shut up in cages; so they are, to say the least, unsatisfactory pets. All these large squirrels resemble each other so much in habits that, color excepted, what is said of one may apply to all. Jerdon's remark at page 167 is very just, for "they are awkward in their gait on the ground, but most active "on trees, jumping from bough to bough with amazing agility."

They manage when once fired at to conceal themselves in a wonderful way, when their bright colors, large size, exceeding that of an ordinary cat, and great length, body and large tail included, approaching three feet, are taken into consideration.

No. 39.—Sciurus Ferrugineus?

JERDON, No. 154, PAGE 170—RED SQUIRREL:

Is "Sciurus ferrugineus" page 170 of Jerdon, the richly-colored and very handsome red squirrel found in lower Burmah?

Two or three colonies of these splendid squirrels were always to be found in Kimendine, near Rangoon; and about a house in which I lived, were almost as impudent as the little Indian pests, the common striped squirrel, page 170 of Jerdon. I tried to tame one caught in a wire rat-trap, but as it would not feed in captivity, had to give it freedom again. I have been told that they always get mangy and out of condition in confinement. The experiment is worth a trial, for I do not know any animals that if they would live in captivity, would make handsomer or more engaging pets.

No. 40.—Sciurus Palmarum.

JERDON, No. 155, PAGE 170; COMMON STRIPED SQUIRREL.

Although I do not believe that any traveller could be long in Madras without, if he were in good health, having an opportunity of admiring the graceful antics of, or if he were ill of reviling the shrill voice of, this pretty little squirrel, I have been at one station on that coast where they were not to be found. I dare say that they have by this time arrived at Samulcottah in the Northern Circars; but when I knew that quiet little out-post some years ago, it was free from them, although they, or perhaps the next species mentioned by Jerdon, No. 156, page 171 of his book, "S. Tristriatus," the "jungle striped squirrel," were abundant in the trees on the road from Rajahmundry, only thirty-one miles off, and in fact to within a much less distance. It is difficult to account for this. Samulcottah was a very old station, where there were at one time an old fort and buildings that would attract these presuming little

pests, which appear to build their rude nests and to live as contentedly on our houses as they do about trees. My own idea is that "S. "palmarum" is not indigenous to the Northern Circars, but that from some southern resting place he followed that fine avenue of trees, that for scores of miles together marks out the northern road ; and that Samulcottah being off this direct line and severed from this avenue by cross-roads without trees, the squirrels passed over the turns branching off to Samulcottah at Rajahnagram and Juggumpettah, and went on their way to the north.* My present impression is that they were not to be found at Russelcondah ; but in this I may be mistaken. Troublesome as he is from his impudent familiarity and shrill squeaking voice, which reminds me more of the imitations of barking that issue from some toys than as Mr. Blyth says at page 171 of Jerdon, " the chirping of birds"—the beauty of this little squirrel causes most of his offences to be forgiven. They do vast mischief to gardeners, but it should be remembered that they are of great use by destroying many insects, especially white-ants, beetles, both in their perfect and larval stage, &c. They are said to destroy the eggs of small birds, but I have never observed this myself.

As might be expected from their habits, they are very easily tamed. This I know to my cost for one little wretch, that, in a weak-minded moment I rescued from a cat, lived for some weeks almost entirely in my pockets ; into one of which however having crept when I was asleep—he was overlaid and troubled me no more. They are exceedingly active ; far more so I think than the Burmese tupia, whose great agility, or at any rate, that of a very closely allied species, is mentioned at page 65 of Jerdon, and whose habits as mentioned at page 12 of these notes are very much the same as these squirrels. Jerdon may well say at page 171 : " Why it was " named the " palm squirrel," has often puzzled the Indian Natu-" ralist, for though occasionally seen on palm trees, it is so " exceedingly rarely." The reason is, I imagine, that its godfather intended to imply that it was the most common Indian squirrel, and like many painters, thinking that there could not be an Indian scene without palm trees, he jumbled the two ideas together and christened his bantling accordingly.

* Vide Memoranda following page 79.—VAGRANT.

I cannot pass over an incident, characteristic of this pretty little squirrel and, could it be drawn so as to give an idea of the relative sizes, numbers and noise of the animals concerned, one that would fairly represent "dignity and impudence."

A few hours ago, (3d September 1868) at the People's Park in Madras, I was in the enclosure allotted to the Carnivora. Dinner being announced, caused great excitement among the goodly company comprising. I write from memory and may perhaps be wrong in one or two of the junior ranks, but I think I am right.

Two Lions, of great beauty.

Two tigers—the finest I have seen in captivity.

Three junior tigers.

Nine panthers, of various degrees of seniority.

A black panther—of Satanic disposition.

A lynx—of almost fabulous merit.

A hyæna—unsettled, gloomy and malignant.

Three or four young bears—unacquainted with sorrow.

An august and, with the exception of the hyæna, aristocratic assembly of the brute creation that should have ensured reverence or respect from a much more important member of it than a palm squirrel.

However in the midst of the proceedings a very small squirrel came quietly forth from the lion's den, where he had probably been drinking from the royal goblet, calmly seated himself on a post in the midst of, and overlooking the cages, and from this commanding position, scolded or attempted to exceed in noise the entire company.

No. 41.—Sciurus McClellandi.

JERDON, NO. 159, PAGE 173; SMALL HIMALAYAN SQUIRREL.

I sent to the Madras Museum a specimen of a very small striped wood squirrel, shot in deep forest, near Rangoon; it was, I think, nearly allied to this, probably S. Barbei, page 174 of Jerdon.

No. 42.—Pteromys Petaurista.

JERDON, No. 160, PAGE 174; BROWN FLYING SQUIRREL.

Is this the beautiful animal often found in Burmah? if so, it is certainly as Mr. Elliot says, at page 175 of Jerdon, "a beautiful grey," some, perhaps, darker than others, but all with most delicately soft fur,—or is it the Burmah species, P. Cineraceus, Jerdon, No. 162, page 177? Two I have seen in captivity, were exceedingly gentle and were fed almost entirely on bread and milk and fruit. I can well understand Tickell's remark that it feeds "occasionally on beetles and the larvæ of insects," for I know that the common palm squirrel, No. 155, page 170 of Jerdon, is very fond of such diet. I have heard a colony of the flying squirrels that frequented the trees about a house I lived in at Kemindine near Rangoon accused, but I believe most unjustly, of robbing the pigeon roost at night of young birds and eggs. That, no creature without wings or a parachute could have done this, I did believe, but as the place abounded with fish and barn owls, Jerdon's birds, Vol. 1., Nos. 72 and 60, I blamed them, but not the beautiful and gentle squirrels. I saw at Tounghoo in Burmah, just after dawn, a flying squirrel take very nearly as long a flight as that mentioned at page 176 of Jerdon, and as there stated, rise slightly at the end of the flight.* A brother officer saw one sail over the Prome road, about a mile north of Rangoon, and this flight, as the wood was cleared to some distance from both sides at the time, must have been nearer eighty than sixty yards. I do not remember having heard the voice of this animal. I sent a very fine skin from Rangoon to the Madras Museum.

Flying squirrels are as stated at page 175 of Jerdon, "quite "nocturnal in their habits;" therefore although they are, I imagine, to be found wherever there is deep forest they are seldom seen, even by those few who at dusk or dawn visit their haunts, and when seen still more seldom recognised: for until the spectator has become acquainted with this beautiful animal, he may easily take for a kite or more probably for some large owl, the shadowy object which he sees for a moment only, perhaps at a distance

* Vide Memoranda following page 79.—VAGRANT.

of eighty or a hundred yards, sailing silently from the upper branches of some thickly foliaged and very lofty tree towards a lower one, and scarcely visible through the dim morning light and deep forest shade.

One I have seen in captivity appeared to pass the greater part of each day in sleeping in the positions mentioned by Tickell and quoted at page 175 of Jerdon, viz., "either sitting with its back "bent into a circle, and its head thrust down to its belly or lying "on its back with the wings and paruchute extended."

No. 43.—Sciuropterus Phayrei?

JERDON, NO. 167, PAGE 180; SMALL FLYING SQUIRREL.

I caught, or rather some crows did for me, while at Shuay Gheen in Burmah, a very beautiful specimen of a very small flying squirrel, probably, "S. Phayrei," page 180 of Jerdon. It lived for some days in confinement, was very gentle and fearless, eating plantains freely. I gave it to Major Berdmore, who sent it, I think, to the Calcutta Museum, and it is probably the specimen mentioned by Doctor Mason in his work on Burmah. It was in shape nearly a perfect miniature of the larger flying squirrel, but with even more delicate tinting of the soft fur.

No. 44.—Gerbillus Indicus.

JERDON, NO. 170, PAGE 184; THE INDIAN JERBOA RAT.

I can corroborate Mr. W. Elliot's statement, quoted by Jerdon at page 185, that this beautiful species of rat is in the habit of "making "astonishing leaps." I have seen them when released from a trap, baffle and elude dogs in the most extraordinary manner by wonderful jumps made over the backs, and apparently into the very teeth of their pursuers. Jerdon may well say, vide page 185, that, "it "is certainly the most elegant and graceful of the family, and well "deserves the name of the antelope rat, equally from its color, "activity and fine, full, gazelle-like eyes." I have heard this name applied to them by natives.

No. 45.—Mus bandicota.

JERDON, NO. 174, PAGE 193; THE BANDICOOT RAT.

The dimensions given by Jerdon, viz., "length, head and body, "fifteen inches, tail thirteen, and weight, three lbs.;" hardly give a sufficient idea of the formidable appearance of this gigantic rat, which, had it one-half the activity and courage of our English pest, should be able to show good fight against an ordinary terrier. The bandicoot is, however, a sluggish and cowardly animal, and, although from its size and weight it takes a good of worrying before it dies, it seldom does much in self-defence, and any moderately good dog can kill it with ease. Jerdon, while mentioning that bandicoots are exceedingly numerous in Fort Saint George at Madras, might also have said in proof of the mischief they do, that Government has authorized a reward of one anna, three half pence, for each bandicoot killed within the walls of that fort: at any rate, if this order is not still in force, it is to be found at page 199 of the Military Pay and Audit Regulations of the Madras Presidency, published in 1842. Jerdon is right in saying that "when assailed it "grunts like a pig—hence its Teloogoo name *pandi koku*," *i. e.*, the "pig-rat, whence the word bandicoot is derived."

I do not think I ever displayed more agility in my life than when, in the hot blood of Ensignhood and being minus nether raiment of any kind, I once assaulted a huge bandicoot which I had found in my bath-room and prevented from leaving it. My enemy with savage grunts charged at my naked legs, and as I had not a weapon at hand wherewith to slay him and was ashamed to let him go; my only chance of freedom from danger was in jumping as high and as far as I could. I have known bandicoots to burrow in corn stacks as do our English rats: they are also most destructive to the bales of pressed forage often brought over with Australian horses imported into India. The bandicoots of Rangoon struck me as being much smaller and darker than the Indian animal; could they have been the last variety—"Mus rattus" the black rat, No. 175 of Jerdon, whose book I had not then to refer to?

While running about at night, bandicoots grunt in the hog-like manner referred to by Jerdon at page 194, and attention is often ttracted to them from this habit.

No. 46.—Mus urbanus? Mus dubius?

JERDON, No. 186, PAGE 203; COMMON INDIAN MOUSE.

I found in my room at the Club at Ootacamund, a full-grown female mouse not, as far as I can see, fully described in Jerdon—is it No. 186 "Mus dubius? it can hardly be so, for that variety is said, by Jerdon, at page 204, to be considered to be the young "of Mus urbanus," which is conspicuous from its small ears and large eyes.

The dimensions were as follows:—

Head, $\frac{7}{10}$ of an inch,

Ear, much rounded and nude, $\frac{3}{10}$ of an inch,

Body, $2\frac{3}{10}$ of an inch,

Eye, very small, in this respect differing from "Mus urbanus," tail bare, except tip which was slightly tufted, $3\frac{1}{10}$ of an inch,

Color, upper parts dark-brown throughout, slightly paler on chest and between hind legs; not a white hair on the animal.

I sent my specimen to the Madras Museum, it may however after all turn out to be "Mus urbanus."

No. 47.—Rhizomys.

JERDON, No. 201, PAGE 214; BAMBOO RATS.

These curious, not to say hideous looking creatures, were often brought into Shuay Gheen and Tounghoo in Burmah by the Karens, who found them about the roots of bamboos; all that I have seen were very savage, and although they did not seem to dislike confinement, quite untameable.

I fancy that Shaw in Vol. 2 of his Mammalia alludes to this, or a nearly allied species, as the "blind rat," the bite of which he says is very severe, and that "it has no voice but emits a kind of snort-"ing sound and gnashes its large teeth in a menacing manner "raising its head at the same time."

Those I have mentioned were probably "Rhizomys castaneus," mentioned at page 214 of Jerdon and, if I mistake not, specimens were sent to the Calcutta Museum by the late Major Berdmore.

No. 48.—Hystrix leucura.

JERDON, NO. 204, PAGE 218 ; INDIAN PORCUPINE.

Although these animals abound in most of the rocky hills in the Madras Presidency, they are not often, except I believe in the Neilgherry Hills when dogs come on them during "beats" for game, killed or even seen by sportsmen. They are exceedingly wary. All men who have waited for bears at daylight* must have heard porcupines rustling home a few minutes before dawn : this must have occurred scores of times to me, but I can only remember one instance of a porcupine showing itself *after* daylight. A brother sportsman and I were on opposite sides of a ravine waiting for a shot at a bear or panther returning home : just at dawn, a porcupine appeared and, as I suppose his house was somewhere between us, trotted and fed, grunting hog-like, about the little valley at our feet, until long after the sun was well up and until I, despairing of other game and bearing in mind his delicious flesh (for that of a porcupine is the most delicate I know of) shot him. Well may the flesh be tender and of delicate flavor for, as many gardeners know to their cost, porcupines are most scrupulously dainty and epicurean as to their diet. A pine apple is left by them until the very night before it is fit to be cut ; peas, potatoes, onions, &c., are not touched until the owner has made up his mind that they are just ready for the table.

At Russelcondah, where they abounded and robbed us ruthlessly, we seldom killed them ourselves, but one of our horse-keepers, by digging a hole near some bed of choice vegetables and waiting in it all night, succeeded in shooting a great number of our delicate pests, which we were delighted to eat whenever we could get them.

Strange to say, I have never heard them accused of doing damage to sugar-cane plantations, although they doubtless do so and, by coming later and leaving earlier than other animals, manage to transfer to others, bears, hyænas, jackals, &c., much blame which they should bear.

No. 49.—Hystrix Bengalensis.

JERDON, NO. 205, PAGE 220 ; BENGAL PORCUPINE.

If this be the smaller porcupine common in Orissa, it appeared to

* Vide Memoranda following page 79.—VAGRANT.

me to differ from the last species, in the sites selected for burrows which were generally in open ground and in colonies, reminding me a good deal of rabbit-holes.

The park at Rumbah, near Ganjam, for example, was full of these burrows, dug in the sandy soil between the house and the Chilka lake. I have always found the larger porcupines near hills, in holes in the sides of which and under rocks they lived, although they came into the plains at night to feed. With this exception the habits of this porcupine appear to be the same as those of the last species, and to be equally destructive to gardens.

No. 50.—Hystrix longicauda.

JERDON, No. 206, PAGE, 221 ; CRESTLESS PORCUPINE.

If this be the Burmah species, I had a very fine one for many months ; he was perfectly tame, but very ill-tempered, and if "put out" in any way would erect his spines, and charge backwards,* or sidewards, in the most ridiculous way to witness, but appaling to any nervous person whose legs were unprotected. He was a most troublesome animal to keep, for he was constantly with his enormous chisel-like teeth, cutting his way out of the boxes or barrels in which he was confined or, if he was at large in an out-house attempting to burrow. Pine apples which are very cheap in Rangoon during their season were his principal food, but he would very readily eat grass or any vegetable.

I dare not say how many square miles of forest near Rangoon have an undergrowth of pine apple, or how cheap I believe the fruit to be, but I have myself often purchased for Sir Gaspard, the surly epicure just mentioned, from men passing my house on their way to the Rangoon market, four large and very fine pine apples for one anna, three half-pence of English money ; and I do not doubt that I was cheated, at least cent. per cent. in each bargain.

No. 51.—Leporidæ.

JERDON, NOS. 207 AND 208, PAGES 224 AND 225 ; "COMMON" AND "BLACK-NAPED HARES."

I can corroborate the statement, page 224 of Jerdon, that hares

* Vide Memoranda following page 79.—VAGRANT.

in India go to ground readily. About Samulcottah, in the Northern Circars, in particular, they appeared to know every vacant fox earth in their neighbourhood and to run to them as naturally as the original owners would have done. I do not, however, remember a hare thus taking advantage of a fox-earth which appeared to have a tenant; they always went to ground in those that were deserted, or the owners of which we had killed. I once shot a hare which got into a hole in an ant-hill, and which had it not been for a dog, I could never have found.*

The hares of Upper Burmah, page 225 of Jerdon, did not to me (but I write from recollection only) appear to differ in any way from those of India. They are not, I believe, to be found anywhere in Lower Burmah. Hares, I have heard abound near Prome, Thayetmyo, and the other stations on the river Irrawaddy; a part of Burmah, of which I have seen very little. I doubt however if they are often to be found south of Tounghoo on the Sittang river.

When Tounghoo was first occupied as a frontier post by British troops, hares were very abundant near it and a sportsman who knew the haunts and habits of the animals might shoot one or two almost any evening on the plain to the north of the old fort, or city, we were first quartered in, or on the ground which was afterwards allotted as a site for the present cantonment; but I could never get over the feeling that we were killing the progeny of quasi domesticated animals, originally imported by some Governor of the old city as pets for the ladies of his household. How far this notion is even founded on fact I know not; nor whether it has been proved that hares are at all plentiful in more remote parts of the district, or to the south of Tounghoo, I merely mention, for what it is worth, my idea at the time, which although it may have been a right one, did not, I am ashamed to say, prevent my shooting a hare whenever an opportunity offered. Hares, like many other animals and birds, appear to be very easily fascinated by the bell and flame decoy which I have attempted to describe at page of these notes, and like all other Indian game, they suffer terribly from want of game laws, or a close season, or some protection against the ruthless poaching which now exists. The animal in some places affords

* Vide Memoranda following page 79.—VAGRANT.

very pretty shooting and often gives a better course than the little Indian fox, page 54 of these notes and 150 of Jerdon's book. The flesh is generally dry, tasteless and as unlike that of the English hare as can well be imagined.*

No. 52.—Rhinoceros.

JERDON, PAGE 232 ; RHINOCEROS.

I have twice while looking for elephants, come upon a rhinoceros, perhaps the same animal in both cases, in a large swamp, in the dense forest north of Shuay Gheen in Burmah, and not far from the beautiful Bogatha stream, but although we must each time have been within a few yards of him as he was wallowing in the mud, and we pushed after him as fast as most men could go, for my gun-carrier and I were in good training, and the three-hoofed track was easy to follow, he out-paced us altogether, and I never got more than a glimpse at a dusky hide, not sufficient to warrant a shot.

No. 53.—Asinus.

JERDON, PAGE 236 ; WILD ASS.

Although the animal there described is not an Indian one, I must try to preserve the following account taken from a collection of "Curious Voyages and Travels, by J. Ray, F.R.S., in 1738," and from observations made apparently by "Sir Henry Middleton, of "Ways and Roads between Egypt and Ethiopia."

"In the month of October an Embassador of Ethiopia came to "Cairo, with several presents for the Grand Signor, and among "others, an ass that had a most delicate skin, if it was natural, for "I will not vouch for that, since I did not examine it. This ass "had a black list down the back, and the rest of its body was all "begirt with white and tawny streaks, a finger broad a-piece, the "head of it was extraordinarily long, striped, and party colored as "the rest of the body, its ears like a buffle's were very wide at the "end, and black, yellow and white ; its legs streaked just like the "body, not long-ways, but round the leg, in fashion of a garter, "down to the foot, and all in so good proportion and simetry, that "no lynx could be more exactly spotted, nor any skin of a tyger so

* Vide Memoranda following page 79.—VAGRANT.

" pretty, this may be the Zembra. The Embassador had two more " such asses, which died by the way, but he brought their skin with " him, to be presented to the Grand Signor with the live one."

No. 54.—Sus Indicus.

JERDON, No. 215, PAGE 241 ; INDIAN WILD BOAR.

I have often in long grass, but generally in millet fields : (Sorghum, the " Jowari" of the northern, and " cholum" of the southern districts of the Madras presidency), come on the shady arbours, mentioned at page 242 of Jerdon, who says that when long grass forms their chief shelter, " they construct a sort of rude abode by " cutting a lot of grass and spreading it out carefully on the " ground. They then creep under this and raise it up to the proper " height, and they remain in these lairs, which during the day afford " a good shelter from the heat of the sun."*

Hog-hunting has been described " *ad nauseam* ;" but one must see to realize the courage of this glorious animal. I saw a very fine boar, that had every chance of saving his life ; for he was unwounded, on bad ground and within, at most, sixty yards of a rocky and wooded hill, which had been his point throughout a long run, turn on the foremost rider, whose horse swerving, caused the coveted "*first blood*" to be missed, although the man was generally sure with hand or eye, one of

> " The Scots who rein a mettled steed"
> " And love to couch a spear."

The hog then charged the second foeman who happened to be my servant with a spare spear, getting, to my horror, under the horse, a very valuable Arab, that jumped over the boar and kicked him hard in the ribs ; the rider, a Mussulman, swearing freely, but not using the weapon. The distance to the boar's haven, was by this time so much diminished that to reach it, he had only to cross a narrow cart track up which I was coming at best speed. Seeing me, he turned at right angles and charged home, as only a hog can and as few horses without pure blood can be trusted to stand, springing almost off the ground and cutting my mare on the stifle in his rush on the spear. I do not know any other *unwounded*

* Vide Memoranda following page 79.—VAGRANT.

animal, that would thus have gone out of the way to meet his death in an encounter with three mounted men one after the other.

Although the heads of the Burmah hogs shown to me by Mr. Blyth, were certainly smaller than those of India, the animals I have seen in Upper Pegu (I do not know anything about Tenasserim) appeared to me to be about the same size as those I had seen in former hunting days. The Burmah hog has certainly as much courage as his Indian relations, and I have seen men with very severe wounds, inflicted by these animals. While after large game amongst the Yomah range of hills, west of Tounghoo, I was on one occasion faced by a fine boar with very large tusks, that disputed possession of a ravine with me, covering the retreat of his zenana, and offering me fair battle so gallantly, that at one time I thought I should have been obliged to shoot him in self-defence.

I have long been of opinion that there should be magnificent hog-hunting in Lower Burmah, and predicted that ere many years, when horses have become more plentiful, and means of communication better, many a first spear will be won, over the grassy plains of that country. It will be interesting to know, whether the long spear of Madras and Bombay, or the short jobbing one of Bengal will come into fashion over the new ground. It may be narrow-minded prejudice on my part, but I confess that my sympathy will be with the men who use the long weapon.

At Port Blair, I saw a specimen of Sus Andamansis, page 243 of Jerdon, it was a miserable little animal that appeared a fit prey for the dwarfish savages who infest these lovely islands, but it is said to show gallant fight when they try to capture it.

No. 55.—Camelidæ.

Jerdon, page 247;—Camels.

As camels are entirely domesticated, Jerdon has only indicated their position among ruminating animals; but, as these notes are not in any way scientific productions, I trust I may be allowed to say what I know of these valuable slaves; for they certainly are nothing more, charming hacks and excellent beasts of burden though

they be, I do not think that any education or coaxing could elevate them to the higher ranks, as friends, comrades, sporting companions and playfellows of man as are so many of his pleasant acquaintances among the brute creation.

Like many human beings, camels get credit for good qualities which they do not possess; for example, patience is popularly supposed to be one of their virtues. Now I do not know a more discontented fidgetty, ill-behaved animal than a camel when being detailed for duty.

Some Indian traveller, if I mistake not, Russell, of the "*thin red line*" fame gives an excellent description of the objections raised by baggage camels to being laden, but the impatience of one of these is trifling to that shown by many of the highly-bred and light animals, kept solely for saddle-work; most of which are really very beautiful game and blood-looking creatures, in appearance as different from a baggage camel as is a thorough-bred from a dray horse. Unless a saddle camel is very well broken the moment the rider's foot is in the stirrup, up springs the camel, hind quarters first, so that, as the beast's knees are still on the ground, the rider is shot well forward to be the next moment as rapidly jerked back, as the forelegs are brought into play; then probably the beast makes a bolt for a hundred yards or so, perfectly regardless of the reins, or whatever may be the proper term for the tiller rope like guiding strings attached to the wooden studs let into his nostrils. Then they give themselves as many airs, and they are as fanciful about the particular objects they elect to shy at, or to object to, as many horses and to make one go pleasantly, a light hand is even of more consequence than in horsemanship, for these beasts have as many peculiarities of tender or hard nostril as a horse has of mouth. This however once understood; I do not know a more pleasant hack, or one of greater service to a sportsman than a well-broken riding camel, one that will sit quietly while being mounted and will not pull. The exertion, so often spoken about, of camelmanship, if there be such a word, is only imaginary; the rider has only to sit as loosely as possible—that is not to grip the saddle and to give his arms, legs and body any play that will prevent their resisting the motion of the huge animal; to sit native-

like in fact, "*all legs and wings*"—this once accomplished he may ride for hours and for days together without feeling fatigued. Some of the pleasantest days I have ever passed, were spent in Bundlekund, while marching in January, the coldest time of the year, from Saugor to Futtahpore, when sometimes my only companions from dawn to dusk would be my riding camel and a retriever. If I wanted to shoot, I had only to dismount and fasten the camel to some "acacia" or "mimosa," or whatever the proper term for the tree may be, on which, regardless of thorns, she grazed contentedly until my return—when she would without a murmur obey the order to "sit down" and allow guns or game to be packed on her. Her only failings were an objection to country carts, which in a narrow road caused a constant application of the hunting spur to her shoulders with a trial of temper to her rider, and a dislike to dogs at which she used to kick or strike most violently. Free use on my part of stick and spur, however overcame her dislike to my retriever, and I have often been much amused when in passing through some walled Bundlecund village, he gave chase to a dog to be, in his turn, hunted back by a pack of the pariah's relations. He knew to a yard where support was to be found and always ran between the legs of the camel who, fearing her rider, merely winced at him, waiting to punish the first pursuer who was pretty sure to be caught, amongst her long legs and, with jerks very trying to the rider, sent forward with her hind and backward with her forefeet, so violently that, if not crippled for life, he gave up the chase at once.

A camel must be a very tender-skinned animal, for the slightest prick with a hunting spur, will cause blood to spring from the shoulder, the place where the rider's heels naturally come to. This enforced acknowledgment of the rank of my dog was the only act of intelligence I have ever known any camel display. Much as we were together, I could never get the one I have just mentioned to feed from my hand, an expression of confidence in me that I have gained from every animal I have tried to be on good terms with, except all the camels I have ever been acquainted with, some members of a herd of Burman buffaloes I possessed while I was at Tounghoo and "Evangeline" the wild dog mentioned at page 52 of these notes.

The most ridiculous instance of this impatience of camels I have ever seen, was at an inspection of that well known regiment Ross' Camel corps, by a General on whom I was in attendance as a Staff officer.

The corps consisting, if I remember right, of four troops of one hundred men each, two of British soldiers picked, I believe, principally from the Rifle Brigade and two of Seikhs, the most warlike race in India, was a sight to gladden the eye of any man proud of being a soldier. They were drawn up in column and dismounted, with their four hundred camels also in column of troops seated, each animal with its driver, about one hundred yards to a flank.

The ordinary Infantry inspection being over, the men were ordered to file to their camels, which up to this time had been sitting most demurely and to all appearance quite unconscious of what was to take place ; as the men approached, each camel pricked up its head in great excitement, and looked most ludicrously like a gigantic turkey.

The men having taken post and "*Prepare to mount,*" being ordered, the anxiety of the animals increased fifty-fold, and almost every one of the four hundred commenced that wonderful and horrible turkey-like gobble, all camels delight in, the uproar increased at the word "*Mount*" and continued until the Commandant on seeing every man in his place, ordered the "*Rise,*" when in a second every animal returned to its normal state of quiet.

Although these are merely notes on Natural History, I trust that I may be excused, remarking that the corps I saw that morning came nearer to my *beau ideal* for soldiers on service than any I have seen before or since.

I cannot pass over a remarkable instance which occurred that morning, of what every sportsman must have observed in one way or another ; color in dress of men, animals and ground almost perfectly corresponding with each other.

The time was during the mutiny, and the Division was in the field ; the "*camels*" had just joined our force from, I think, Agra, but for some reason, now forgotten, had been halted some miles

from, instead of with, our camp. The following morning, the General Commanding the Division, rode out to look at them, his staff of course being in attendance. Beyond the general direction, we did not know where the corps was encamped and, on reaching a part of the plain from which we expected to see them, we fancied we had made a mistake in our ground, as not a camel was visible. Suddenly I caught sight of them, drawn up as before mentioned, but the four hundred soldiers in their "kakee" or dust-colored clothing and the same number of camels in their dusty, sandy or russet grey coloring, seated quietly on the plain, were all so much the color of the bare red plain on which they were posted and of some small hill behind them, that it was almost impossible at the distance of half a mile or eight hundred yards to tell what was there.

Buffon's conjectures, that the extraordinary callosities about camels, having been originally produced by ill-usage on the part of man, have been transmitted by descent, are so little known and withal so quaintly interesting that I do not hesitate to enter them here :—

"If we reflect on the dissimilarity in this animal from other quadrupeds, we cannot doubt that his nature has been considerably changed by constraint, slavery, and perpetual labor. Of all animals the Camel is the most antient, the completest, and the most laborious slave. He is the most antient slave, because he inhabits those climates where men were first polished. He is the most complete slave, because in the other species of domestic animals, as the horse, the dog, the ox, the sheep, the hog, &c., we still find individuals in a state of nature, and which have not submitted to man. But the whole species of the Camel is enslaved ; for none of them exist in their primitive state of liberty and independence. Lastly, he is the most laborious slave ; because he has never been nourished for pomp, like most horses, nor for amusement, like most dogs, nor for the use of the table, like the ox, the hog, and the sheep ; because he has always been made a beast of burthen, whom men have never taken the trouble of yoking in machines, but have regarded the body of the animal as a living carriage, which they may load, or overload, even during sleep ; for when pressed, the load is sometimes not taken off, but the animal lies down under it with his legs

folded, and his body resting on his stomach. Hence they perpetually bear the marks of servitude and pain. Upon the under part of the breast is a large callosity, as hard as horn, and similar ones on the joints of the limbs. Though these callosities are found on all Camels, they exhibit a proof that they are not natural, but produced by excessive constraint, and painful labor ; for they are often filled with pus. The breast and legs are, therefore, deformed by callosities ; the back is still more disfigured by one or two bunches. The callosities, as well as the bunches, are perpetuated by generation. As it is obvious that the first deformity proceeds from the constant practice of forcing these animals, from their earliest age, to lie on their stomach, with their limbs folded under the body ; and in this situation to bear both the weight of their own bodies, and that of the load laid on their backs, we ought to presume that the bunch or bunches have also originated from the unequal pressure of heavy burthens, which would naturally make the flesh, fat, and skin swell ; for these bunches are not osseous, but composed of a fleshy substance resembling a cow's udder. Hence the callosities and bunches should be regarded equally as deformities produced by continual labor and bodily constraint ; and though at first accidental and individual, they are now become permanent, and common to the whole species. We may likewise presume that the bag which contains the water, and is only an appendix to the stomach, has been produced by an unnatural extension of that viscus. The animal, after suffering thirst for a long time, by taking in at once as much, and perhaps more, water than the stomach could easily contain, this membrane would be gradually extended and dilated, as we have seen the stomach of a sheep dilated in proportion to the quantity of its aliment. In sheep fed with grain the stomach is very small ; but becomes very large in those fed with herbage alone.

"These conjectures would be either confirmed or destroyed, if we had wild Camels to compare with the domestic ; but these animals nowhere exist in a natural state, or if they do, no one has described or observed them. We ought, therefore, to suppose that everything good and beautiful belongs to Nature, and that whatever is defective and deformed in these animals proceeds from the labor and slavery imposed on them by the empire of man."

Strange and perhaps often incorrect as may be many of the ideas of this dear and enthusiastic old naturalist, there is solemn and sad truth, in what he says in the last sentence I have quoted regarding "every thing" "good and beautiful" and "whatever is defective and deformed." Notwithstanding our success in our scientific breeding of domesticated animals, I fear that most of their miseries and ailments have in one way or another been "imposed on them by "the empire of man."

Additional remarks upon

No. 40. Common striped Squirrel.
No. 42. Brown flying Squirrel.
No. 48. Porcupine.
No 51. Black naped Hare.
No. 54. Wild Boar.

Since these notes were printed ; the same friend who has given me the information, regarding the habits of tigers on the hill ranges of Southern India, mentioned at page 22, has kindly furnished me with the following interesting remarks upon No. 40, the common striped squirrel, No. 42, the brown flying squirrel, No. 48, the porcupine, No. 51, the black naped hare and No. 54, the wild boar.

I believe that my friend's memoranda should have been published in an appendix, or as additions to what I have said of each animal he mentions ; but as my productions are merely unscientific scraps put together by a man utterly unskilled in book-making, I trust I may be excused if I am in any way out of rule in entering the following information here. I am glad to find that in almost every instance it corroborates what I have said, or, what is of far more importance, Doctor Jerdon has told us.

He writes as follows, on No. 40, common striped squirrel, page 60.

" With reference to your remarks on the migration of the com-
" mon striped squirrelto Samulcottah, I may mention that until very
" recently there were none of these little animals in Ootacamund,
" but since the new ghaut has been made and more especially since
" it has been planted with Australian trees, they have gradually
" migrated from Coonoor ; at first they were only to be seen on the
" road near the latter station, but now they occupy the whole line
" of road and at last have reached Ootacamund. I shot one a few
" months back close to Sylk's hotel."

The same friend thus writes with reference to my notes on No. 42. The brown flying squirrel, page 63.

" When I was in charge of the Annamullay forests some brown
" flying squirrels inhabited the large forest trees fronting my hut :
" and I used often to see them just before dark, pass across the open-
" ing. They would ascend to the topmost branch, spring off it and

" slowly *float* down to near the bottom of the tree on the opposite " side of the opening. This was the position of the squirrel in its " flight, and I noticed particularly that just as it approached the tree " it made a slight curve upwards as mentioned by Jerdon ; some of " these flights were at least 60 yards from *tree to tree*." A cleverly drawn sketch by the accomplished sportsman whose words I have just quoted represents a flying squirrel floating down supported by his extended parachute and with his head and forepaws up, standing, so to speak, in the air, on his hind legs, if not in an erect position at least at an angle of 50. This would also be my evidence regarding the position of the creature during flight. If I mistake not, however, the usually conceived idea is that the flying squirrel precipitates itself headlong, " *takes a header*" in fact at exactly the opposite angle.

Tickell's remark of the pace of this animal when on the ground, viz., that it is " a hobbling or hopping kind of gallop" vide page 176 of Jerdon, and that the parachute keeps " flapping about and " impeding its movements"—is very correct as indeed are all of the descriptions given by that excellent naturalist.

I remember a brother officer remarking of a tame one " that in movement it resembled a rabbit rolled up in a towel and wearing the brush of a fox."

My friend further remarks on my notes on the Indian porcupine, page 67.

" On more than one occasion I have seen porcupines on the " Neilgherries long after the sun has been up, but always near " their earths. I have frequently had my dogs wounded by porcu- " pines, occasionally with two and three quills sticking in their " bodies, evidently driven in with considerable force. A short time " ago, I was present at a beat for samber, when a fine spaniel was " killed by a stab from a porcupine quill which had penetrated " deep into his loins. How do porcupines deliver these severe " thrusts with their quills ? I think they must charge *backwards* " to enable them to accomplish this. I see that Jerdon, and you " also say they do charge *backwards*."

He says also with regard to my notes on the black naped hare No. 51, page 68.

" The black naped hare of the Neilgherries, which appears to be " the same as that of the plains, only larger from the effect of climate, " often when chased by dogs runs into holes and hollow trees. I " have found some of the Neilgherry hares to be nearly if not quite " equal to the English hares in flavour. I think a great deal depends " upon keeping and cooking."

He also remarks on what I have said of the Indian wild boar, page 71, No. 54.

" I have met with these grass abodes, but never found an occu- " pant. I was under the impression that they were made by sows " about to litter ; they are certainly not always made as shelter from " the heat of the sun, for I found one at Baudapore last September " on the bund of a tank which was well shaded by trees and bushes."

No. 56.—Cervus Wallichii—Cervus Affinis.

JERDON, NOS. 217 AND 218, PAGES 250 AND 251 ; KASHMIR STAG, SEKIM STAG.

I saw in Rangoon and had photographed, a wonderful pair of horns, supposed to be those of a Kashmir stag, but from the description of the "Shou" given by Jerdon, at page 252, I imagine a Sekim one. They had been brought from Calcutta to be shown in the Rangoon exhibition of 1865, and were supposed to be the pair mentioned in the foot-note to Blyth's catalogue, page 147. From memory, and even with a correct photograph to guide me, I shall not attempt to describe them further, than to say, that until I saw these horns, I had not an idea, that so magnificent an animal of the deer tribe as their original owner must have been, was to be found in the world.

No. 57.—Rucervus Duvaucellii, Cervus frontalis.

JERDON, NO. 219, PAGES 254 AND 255 ; SWAMP OR "BARA SINGHA" DEER.

JERDON, NO. 219, PAGES 254 AND 255 ; BROW ANTLERED RUSA DEER.

I have before me a photograph of heads of a "bara singha" killed in Central India, and two of the brow antlered deer, "Cervus frontalis" killed in the plains of Pegu and presented to the Madras Museum, where they are at present, November 1868.

The difference is very distinctly marked. With the first, the horns are wider apart at the base, while those of the second diverge much more afterwards, sweeping boldly out from above the second point, the brow antler of the swamp deer is not so long in proportion as that of "Cervus frontalis" and is directed more forwards than the other, which, did it not turn outwards would, by bending down vizard-like, mask the face to the nostrils. The horns of "Cervus frontalis" are much rougher than the other and the six points on each horn are thus divided.

"Swamp deer ;" one brow antler and five branches at top.

"Brow antlered rusa;" one very long brow antler, bending down over the face as just mentioned, two branches just above and three at top.

I fancy that the common samber is sometimes called "bara singha" in the Deccan. I have had a blue bull "nilgai" pointed out to me as a samber by a villager, so there may perhaps in some instances have been mistakes made between the swamp deer or "bara singha" and the samber, especially with the hinds, and in Burmah between the "brow antlered" and the common samber or "rusa."

Both native hunters and their European employers are often in the habit of calling any large female deer a samber hind and of disposing of any small red one as a "jungle sheep."

No. 58.—Rusa Aristotelis.

JERDON, NO. 220, PAGE 256; THE GREAT RUSA, SAMBER.

I see, at page 258 of Jerdon, that the thickest pair of horns in the Calcutta museum are said to have come from near Cuttack. In the deep, almost impenetrable and, at certain seasons, deadly feverish forests of Goomsoor, the Golcondah Zemindary and other wild back woods of the Northern Circars and of Orissa, samber and spotted deer grow to an enormous size; for their food is plentiful and they have few enemies except tigers to fear in the dense, thorny thickets which form the undergrowth of their haunts. Even native poachers can do them little harm (not that this should be any reason against the introduction of game laws there, as well as in other parts of India) and the few Europeans, whether soldiers, or civilians who traverse these wilds all do so on duty and are therefore, while well, generally too busy, or if unemployed, almost always too ill from fever to shoot. The largest horns of samber and spotted deer I have ever seen, were in a pile collected for exportation and heaped up in front of a native store house at Cocanada, most of them had been shed in their natural course by the deer and had been picked up by the wild hill people of the Golcondah Zemindary who exchanged them for salt, dried fish and other sea side treasures. I have seen similar heaps of horns at some of the other ports on that coast.

I have had a stag face me as described, at page 259 of Jerdon, by Mr. Elliot who says, that, in the rutting season "the stags are "fierce and bold" and that, he has "seen one when suddenly dis-"turbed face the intruder for a moment, shaking his head, bristling "his mane, distending the suborbital sinus and then dashing into "cover" but I certainly was not close enough to observe whether the suborbital sinus was distended.

I can corroborate Jerdon's statement at page 259, that "the "clattering of a herd of samber over the stones may often be heard "for some distance before they come into view." I mean of course only when the animals are alarmed for at other times they can move as silently as any other wild creature. The Gonds, I believe, have an idea that, while moving on the tops of hills, samber kick small stones over the sides in order that the noise may frighten any tiger that may be below.

I do not know any wild animal that takes so much killing as this deer, this is well pointed out in the "Old Forest Ranger" by Colonel Campbell, whose book must not be confounded with the "Old Shikarry" by a different writer. I once put two, and a brother sportsman three if not four bullets, from 14 and 12 bores and all well placed into a large stag that ran for at least three miles, before the trackers, Orissa foresters, well up to the work could account for him.

The head makes most unexceptionable jelly, and the marrow is the best I know of. I have only once tasted the flesh in India, but I have often been very glad to get it in upper Burmah, and perhaps because any change, from the ration beef and daily fowl diet which in those days formed our fare, must have been acceptable, have enjoyed it.

Is there any truth in the ancient prejudices pro and con, the effects of hart's horn ? The old adage running, I think thus, but I quote from memory only,

> "If thou be hurt with horn of stag ; it brings thee to thy bier,
> "But barber's hand shall boar's hurt heal, thereof have thou no fear."

is to a greater or less extent believed in, I know, by many native hunters.

How far there is truth in the notion it is not for this writer to guess, but he can say, that he who has, with a hunting knife, to put out of pain a large wounded stag, let him be of samber or spotted deer, or even a bull nilgai, or a buck antelope, has a task, which requires nerve and activity, a ready hand with the weapon and a quick eye to guide the blow.

The native hunter's notion is, as was ours, that, there is some peculiar venom for man or dog, in a deer's horn, but, I fancy, that so formidable a weapon as the antler (it is with the basal antler, I think, that the wound is generally given) wielded in terror, or desperation by one of the most muscular and active animals of the forest would, under any circumstances, inflict more severe hurt than would a boar's tusk ; added to this should be taken into consideration the sledge-hammer-like blows given by the fore-feet of a deer, sufficient in themselves to cause death by breaking ribs and inflicting internal bruises which may, when the stab of the horn is noticed, escape observation. All the deer tribe whether male or female can, according to their size, deal blows with their fore-feet with great force and precision.

At page 256, volume X, of the *Indian Sporting Review*, July to December 1849, which I have seen since these notes were written, I find my remark about the size of the horns collected in the hill tracts of Orissa, Goomsoor and Golcondah, corroborated by " Zoophilus" who is, if I mistake not, no less an authority than Mr. Blyth, in the following letter accompanying a very good drawing of a pair of samber horns ; the letter is addressed to the Editor of the *Sporting Review* by " Zoophilus" who says :—

" I send you a drawing of the most gigantic pair of samber horns,
" I ever beheld. They are a pair that have been naturally cast by
" the animal, and were doubtless picked up in the jungle. A mer-
" cantile friend obtained them from a batch of horns collected, as
" he believes, somewhere on the Cuttack coast, or further south
" towards Madras. I examined the heap of them myself but could
" find no others of remarkable size, or even approaching to the
" magnitude of the huge pair figured. The drawing is reduced
" precisely to one-eighth of their dimensions, so that the only mea-

"surement I need give is that they are 10½ inches in circumference "immediately above the *burr* or basal ring, and 8 inches, midway "up the beam—weight 25 lbs.

"Other samber horns which heretofore, I had been wont to con-"sider as fine, and even first ráte specimens, quite dwindle to insig-"nificance by the side of these enormous ones.

"What a giant brute must he have been who bore them !!"

From the drawing, these horns appear to be about 40 inches long. From what I know of the coast I dare say, that they were found at the very place, Cocanada, where I saw those I have mentioned. They certainly must have been magnificent horns ; two of the finest pairs in the Madras Museum weigh 11¾ and 12 lbs. respectively.

Since the above was written I have found the extract from Col. Campbell's work the "Old Forest Ranger" I have alluded to, at page 84, and as it so forcibly illustrates the wonderful vitality, strength and courage, possessed by this noble deer, I do not hesitate to copy it, for I feel certain that I could not have better corroboration on such a matter than any extract from the writings of the author of "My Indian Journal."

"The rifle was silently cocked, and next moment the sportsman, "had brought his sight to bear upon the bristling shoulder of a "royal stag ; as he slowly emerged from a thicket of gigantic fern.

"It was the identical stag, they had first seen, and attempted in "in vain, to stalk ; Mansfield recognised his noble head at a glance.

"The ragged bullet sped hissing through the air, and the hinds, "startled by the report of the rifle, scampered off in wild confusion. "The stag made one sickly reel, but immediately recovered himself "and followed them with blood bubbling from a wound in the "shoulder. Mansfield fired right and left, and planted two balls in "his side, before he was out of range, but without any apparent "effect upon the enormous brute, who rattled down the *Ghât* with-"out a stagger, clattering over the rocks like a cart horse. The "difficulty was now how to proceed. A young hand would naturally "have followed the wounded deer, who with three large balls "through his body, could not be expected to go far.

" But Mansfield was well aware of the extraordinary tenacity of " life possessed by this species of deer and also knew that if follow- " ed, he would pursue his downward course, as long as life remained " and probably be lost, in the heavy forest jungle which encircles " the base of the hills ; and yet if allowed to get out of sight, he " would as probably be lost amongst the high fern, and lemon grass, " or in one of the deep wooded ravines with which the country " abounded.

" Fortunately however, the elevated position, occupied by the " hunters gave them an advantage, of which no man knew better " than Mansfield how to avail himself, and by skilful manœuvering, " he managed to creep from point to point, keeping the wounded " deer in sight, without frightening him, or driving him into the " low country. The stag finding he was not pursued, and never " having seen the hunters, from the first, soon stopped.

" But he was in a very ticklish position, and Mansfield felt, that " his utmost generalship must now be called into play, for if " frightened, or missed, that noble stag was lost to him for ever. " The animal was by this time more than half way down the *Ghât* " with a clear run below him into the heavy forest jungle—and a " few hundred yards beyond him was a dark and dangerous ravine " for which he was evidently making, and from which, if he once " gained its sanctuary, there was little chance of ever recovering " him.

" Desiring Charles and the peon to remain perfectly quiet, " Mansfield with a rifle in each hand, began to creep down the " steep descent, with the stealthy pace of a panther.

" About a hundred and fifty yards from the spot, where the " wounded deer stood gazing stupidly around him, there grew a " small clump of stunted date trees, which did not escape the " practised eye of the deer stalker : this was the point at which he " aimed, and by dint of creeping on hands, and knees, he at last " succeeded in getting behind it.

" Stopping for a moment to draw breath, Mansfield brought his " heavy two-ounce rifle to bear upon the shaggy neck of the stag " and fired. Down dropped his noble head, and a stream of blood " gushed from his throat, but still he stood firm.

"Now for the double rifle, one ball crashed through his ribs, "another plunged into his shoulder, he only winced, and before "Mansfield could re-load, he was off, making for the deep ravine "before alluded to, but his gallant heart was sinking, his strength "failed him before he reached the stronghold. He halted, and "stood tottering beneath the shade of a tree.

"The stag was now so close to the ravine, that Mansfield did "not dare to venture on a long shot, at three hundred yards for "fear of missing him, and the nature of the ground would not admit "of his approaching any nearer.

"For a full hour, by his watch, Mansfield kept sentry over his "quarry, expecting every moment to see him drop. His heart "smote him as he marked the laborious breathing of the poor "animal. He felt disgusted with himself, as every one must have "felt who has been forced to have recourse to such a scene of "butchery in securing his game, and almost wished that the first "shot had not been fired, but it was now too late to retract. The "death of the poor animal was inevitable, and the sooner he was "put out of pain the better.

"Once the stag lay down, and then Mansfield fancied all was "over; but he rose again, and having ascertained by the aid of his "glass, that the animal was gaining strength, rather than getting "weaker, he determined upon risking a long shot.

"The first ball fell short; the second hit, bringing the animal on "his knees, but the stag immediately regained his footing, made a "rush rather than a run and disappeared in the dark ravine, for "which he had been making from the first.

"And this with seven balls through his body!!

"Now we are aware that what we just narrated must appear to "the reader very like an *Indian* story, and if he doubts our veracity "we can hardly blame him. We have only to say that every parti- "cular was noted down on the spot, and we have related them word "for word as they occurred. Tired and dispirited, Mansfield aban- "doned the pursuit, and retraced his weary steps towards the place "where he had left his companions.

" Ayapah, one of the most indefatigable *Shikarees* we ever knew, " now volunteered to undertake the forlorn hope of retrieving the " wounded deer. A council of war having been held on the subject, " it was settled that he should descend the *Ghât* by a rather " dangerous path, which would enable him to reach the bottom of " the ravine, taking a rifle with him to despatch the stag if he " found him : whilst the two sportsmen watched above in case he " should move.

" Another anxious hour passed. At length the trusty Ayapah " was seen to reach the foot of the *Ghât* in safety ; he descended " into the ravine ; and, next moment, a faint report announced that " the death shot had been administered.

" Ayapah reported that he had found the stag dying, under a " rock, but that he got upon his legs, and made a feeble attempt to " *charge* before he fell."

In his appendix to " the Old Forest Ranger" Colonel Campbell gives the following note to this. " *And this with seven balls through his body ! !*"

" This is no exaggeration. The incidents narrated in the text " are taken, *verbatim*, from a journal kept by my brother on the " Neilgherry hills. In my own journal I find an instance recorded " of a stag receiving, *ten* 1oz. balls before he fell. Two, which he " received at first, without even slacking his speed, passed clean thro' " his body, about the centre of the ribs. After this he ran about " a mile, and laid up in a wooded ravine to which I tracked him, " and again beat him up ; one ball broke a hind leg, and another, " entering above the rump, passed along the back bone and came " out near the shoulder. I lost him for about an hour, but again " found him, and when he broke cover, I planted two balls close " behind the shoulder, but still he went away strong. In the chase " which followed, I hit him twice in the body, and at last brought " him down by a ball through the neck, when in the act of leaping " a rivulet. He however got upon his legs again, and stood at bay " in the water, when I was obliged to fire another ball into his head " to finish him.

" I could quote a dozen similar instances of the extraordinary " tenacity of life possessed by this animal."

I have two curious horns of this deer which I found while at Ootacamund in October 1868, and which I intend to present to the Madras Museum.

Both are "*odd*" horns shed by the deer, and picked up in the forest, and to me in both cases the malformations appear to have been caused by a bullet or some accidental blow or wrench when the horn was in "velvet."

The thicker horn is not quite 24 inches in length, but is 9½ inches in circumference, a little above the burr or basal ring. This animal seemed to have had a second basal antler which had however been knocked off by some accident, and this in shortening the growth of what would otherwise have been a gigantic horn,* had caused it to become flattened near the point to a width of three inches, much as is the horn of the fallow deer, "dama vulgaris," above this is the "trifurcate extremity," mentioned by Jerdon, at page 258 of his book. In the other, the point of the horn appears to have been turned off at a right angle from the original direction and to have thus divided horizontally, sending one snag, or prong, back and one, which, presently forks into two, forwards. While I was in Rangoon, Sir Arthur Phayre gave me a samber's head, which is now in the Madras Museum, and on which a small second brow antler bends down over the forehead and turns in towards the skull.

Since, at page 82, I wrote my notes on the swamp deer, or bara singah, I have had a pair of horns of that species given to me. The stag to which they belonged had been killed near Daraconda in the Golcondah Zemindary. The few who now remain of those who some years ago were rebel-hunting and fever-catching in those wilds must remember the spot and the water-fall. As this is, to our cost, thoroughly Madras ground ; and as sportsmen from Jubbulpore, again a Madras station, come on the swamp deer near Mundlah, and as, vide page 255, Jerdon, it has been killed in the highlands of Goomsoor, it may well be counted among the game with which a sportsman from our side of India should be acquainted. These horns from Daraconda are smaller, but otherwise exactly like those I have described at page 82, when writing about the

* The best authority I know on these matters, however, thinks that this horn belonged to a very old stag long past his prime.—VAGRANT.

swamp deer of Central India, that is, they have one brow antler and five branches at top: in fact, six points on each horn, making up the number which their native name "*bara singah*," or *twelve-horned*, signifies.

Jerdon, vide page 254 of his book, gives the color of the female swamp deer as a "pale dun or *whity* brown color." The dear old comrade (now a general officer) mentioned at page 23 of these notes, as having killed an elephant near Bogatha in Burmah, may, if he ever reads this book, call to recollection, that while he was doing the state good service about this very place Daraconda and in the Golcondah Zemindary, he saw (or killed, I forget which, and no wonder for it was while I was a subaltern) "a WHITE *samber*." This was doubtless a bara singah or swamp deer in its winter dress.

All this has however little to say to the samber proper and should therefore have been entered under No. 57. Those who read these notes must remember that their writer is unacquainted with book-making, and pardon irregularities of this kind. So let us return to our legitimate subject the samber.

When I commenced these notes I intended to have avoided all reference to field sports: for fascinating and ever varying though they be to those who follow them in any way from rat-hunting upwards, and in rat-hunting, I dare to say, most British sportsmen have taken their first degree; there is an awful sameness in all accounts of sport, but as I have often revelled both in the "*prose*", and "*poetry*" of the sport, he mentions, and have within the last three hours admired a magnificent illustration by Nature of the latter, I trust I may be excused if I quote from the *South of India Observer** of the 20th August 1868, the following description by HAWKEYE, who in addition to being one of the best sportsmen on the Madras side of India, is one of our best soldiers in every reading of that most lovable word, and who, as he has known me, since I was an Ensign, "*and mine before me*," will, I doubt not, pardon my making use of his notes, which after all are as much illustrations of Natural history as of field sports, and which certainly are far better pictures than I could have drawn with my own feeble pen:—

* A newspaper published at Ootacamund, Neilgherries.

GAME.—THE SAMBUR.

TO THE EDITOR OF THE SOUTH OF INDIA OBSERVER.

"I fear, Mr. Editor, that I have promised more than I can "satisfactorily perform, either to your readers or myself. I will, "however, do my best, and if I fail it will not be from want of "interest or inclination to deal with the subject; but from a want "of ideas and expressions to communicate to others the feelings "that render all connected with game and sport so intensely "attractive to myself.

"Well then, now for the Sambur: but I must premise that it "be understood my description of the animal and its habits is to "be taken as that of a sportsman, not of a naturalist. The sambur, "we are told by Jerdon, is the Rusa stag; similar to the animal "in Bengal, there called the Jerow. He stands, when in his prime, "generally about 14 hands high; some have been killed exceeding "this, but not often. Of all I have ever measured, none did so. "He has usually a handsome head, adorned with well-shaped "antlers. In Central India, I am told, these stags run very large, "with antlers, some 44 inches in length. Good heads on these "hills rarely exceed 38 or 40 inches. His neck is thick and mas-"sive, with an incipient mane, giving him, as he stands "scenting "the tainted gale" on the mountain side, a most noble appearance "indeed, fully entitling him to be designated as "the antlered "monarch of the woods." It is difficult to convey the sensation "such a sight raises in the breast of the sportsman, be he old or "young. The gratification at beholding the noble quarry he is "seeking; the eagerness to gain the trophy the stag carries aloft "so proudly; the agitating nervous feeling that he may by some "mischance escape; all this, and much more, stirs the blood, "making it course through the veins with a sensation almost too "painful to bear. Such were my feelings when first I encountered "this noble stag; and yet, how oft-repeated since! renewed as it "were each time, and never failing to produce the same effect. Old "warriors, they say, get accustomed to war, and heed "the winged "messengers of death" as nought; after a while becoming calm and

" collected in the midst of danger, and feeling little or no excitement
" as they watch the progress of the battle. Not so the sportsman.
" Each time he engages in his mimic war, his heart stirs within him,
" his pulses throb, and he goes through, over and over again, the
" agony—if I may use the term,—of suspense and anxiety that
" never fails to accompany him in the pursuit. When it does so
" fail, then has that man's day gone by. But this is a digression ;
" let us return to our sambur.

" Notwithstanding his bold and dauntless look and bearing, there
" is no more timid animal in the world. Ever on the alert, for his
" enemies are so numerous, he takes the greatest precautions against
" surprise. If leaving his feeding ground to take refuge in a sholah,
" he will be observed to do so with the greatest care, snuffing the
" breeze, and perhaps after entering a wood, returning to the open
" to see that all is right in the neighbourhood. He often acts in a
" similar manner when about to bask in the open ; he will return to
" the summit of the hill over which he has just passed, and look
" back over the ground he has crossed, to see that all is safe. On
" these occasions he often forms his couch at the stem of one of the
" rhododendron trees that dot the hill-side here and there in the
" vicinity of his harbouring wood, or selects the warm side of some
" isolated rock below the crest of a hill. At such times, and in such
" places, it is often difficult to distinguish him ; and many a disap-
" pointment is experienced by the sportsman, seeing his long-looked-
" for quarry steal over the nearest slope and disappear from his
" anxious gaze ; the stag having all the time been watching the
" approach of the incautious stalker. Though timid as above stated,
" and at times apparently frightened to death at the cry of dogs, at
" others I have seen him, so to speak, run savagely—or perhaps
" sulkily is the better term. It seems to occur when the dogs get
" on too good terms at starting. On these occasions I have seen the
" stag decline to lay himself out and flee for his life to the utmost of
" his speed : he appears more inclined to trust to his strength,
" reserving his powers to injure his pursuers, instead of increasing
" his exertions to avoid them. A well known sportsman on these
" hills not very long ago witnessed a case of this kind, and to his
" horror beheld an old stag send his brace of deer hounds flying

" right and left by alternate kicks ; the stag apparently not even " altering his stride in doing so. The sight of a grand stag, looking " so proud and bold, often brings to my mind the vignette attached " to one of Gay's or Æsop's fables, (I forget which) of the " stag " and the fawn ;" a picture that delighted me in my childhood, and " dwells in my memory still. The fable tells us how the fawn in " its innocence asks the stag why it is that he who is so bold and " fearless in appearance, and even makes the very earth tremble " with his bellowings, yet at the faintest sound of a hound's tongue " flies as if frightened to death ? I forget the stag's reply ; but the " moral is something to the effect that boasters are not always the " bravest ; and so it is with the sambur, the smallest dog creates in " him the greatest panic. An instance was mentioned to me not " long ago, of a stag rushing so blindly away from a pack of dogs, " that he went clean over a precipice, and was killed on the spot.

" The manner of hunting the sambur usually practised on these " hills, is confined to " Beating" and " Stalking." I will first deal " with the former, which is the more generally resorted to. At all " times of the year sambur harbour in the woods, sometimes frequent- " ing remarkably small strips of sholah, most unlikely to afford good " cover, at others only to be found in the larger woods or extensive " forests, from which there is little chance of getting them to break. " It is observed however that the deer become much attached to " particular localities, but from what special cause is not understood ; " but certain woods are looked upon as certain " finds," though " repeatedly disturbed and many deer killed from them ; those that " escape return, and apparently bring others with them. The mode " of proceeding usually adopted for a beat is as follows : (We will " limit the number of guns to four.) A few beaters are collected ; " also as many dogs as the four sportsmen can contribute. A " shikarrie or two, well acquainted with the haunts of the deer, are " selected and lead the way. Arrived at the wood, the posting of " the guns next takes place, and this requires a good deal of caution " to ensure sport. Few men are aware that a deer in a sholah is as " keenly alive to all the movements of his enemies without, as he " would be if in the open. If talking takes place, which never " ought to be permitted, he hears ! If a man goes up to his post

" close under the sholah, the deer listens and knows where he stops. " If he goes to windward, his *noxious* smell betrays his presence; " and sooner than face any of these hidden dangers, many a shot is " lost by the deer rushing back through the beaters, and breaking " covert at an unguarded spot. Each person taking up his post " should accordingly avoid a direct or noisy approach to it. With " dogs, however, in full chase, the deer sometimes is forced to break " within shot, notwithstanding that he is aware of the presence of " his enemy, man. Now then comes the moment of excitement!! " Now, though I do not admire "beating" in general, I do not " despise it, or deny that there is sport in the practice; but it is " and must be comparative, and of the lesser degree. The moment " of excitement! A shout from the beaters proclaim a deer on foot, " followed by the hounds giving tongue; a crash through the reeds " and bamboos close by sends your heart into your throat; you know " not what it may be, stag or hind. The rush comes nearer, then " a dead lull succeeds. Now is the time that the experienced " sportsman shows his tact and knowledge. He never stirs, but " remains quietly prepared, avoiding the slightest movement to " signify his presence or alarm the chase, for he is well aware that " either the cunning old stag or the cautious hind has stopped at " the very edge of the wood, to peep out and see that the coast is " clear. Again the cry of the dogs is heard, and the deer, finding " it too hot to stay, breaks covert with a sudden rush, ofttimes " succeeded by as sudden a halt. If the dogs be close at his heels, " on he goes, full speed, but ere many strides are taken, flinches and " stumbles to the well-aimed shot, still pursuing his course head- " long, till choked by the rising blood he rolls over dead on the hill- " side, falling into the thick fern fringing the nearest sholah,—the " haven he vainly sought to reach on leaving his last refuge. Some- " times the deer on breaking covert comes to a dead halt, either " bewildered by the noise, or forced to take an unaccustomed line " by the pressure of the pack. For one second he stands to gaze! " ah, fatal moment! for the next he dies! This then is "Beating." " May I call it the "prose" of sport? Let me before I proceed to " describe the "poetry"—"stalking"—say a few more words touch- " ing the habits of the animal we are so unmercifully slaying on " paper.

"I have omitted to mention one or two distinctive peculiarities. "Of a gregarious nature in general, solitary deer, both hinds and "stags, are repeatedly met with. Again, it has very often been "noticed that a large-full grown stag is accompanied by a smaller "stag or brocket; the latter, as aptly described by a sporting friend, "seems to be the big one's fag, keeps on the alert while his big "brother is grazing, and watches over him when reposing; as if "born to that purpose only. He is a dangerous customer to deal "with, and has often caused sore disappointment and disgust to the "wary stalker. Let me add a few words to those who speak of this "fine animal as an elk, sometimes degrading him still further by "styling the male a buck. By St. Hubert! who ever heard of such "a thing! such a debasing title to this splendid specimen of the "cervines! I tell all good people then that he is not an elk, but a "sambur, not a buck but a stag, aye! and a noble stag too! I may "further mention, though already alluded to in my former letters, "that the stags generally shed their antlers in April. Some early "birds get rid of them even in January. The exception is not "exactly understood, nor the cause of it. These latter, of course, "have their antlers fully developed and hard long before the others "who cast their horns in the spring. The hinds have calves by their "sides at the fall and commencement of the year. The rutting "season is generally believed to be at the fall of the year, and "perhaps during January; at any rate during that month, I saw "two stags having a tournament in presence of the softer sex. On "this occasion one of the stags left the arena, bellowing with rage "or desire, and I was able to follow him in the wood by the noise, "and succeeded in bagging him, and a very fine stag he was. "People sometimes talk of these deer "*barking*;" the term is "incorrect, they *bell*. It is a peculiar and startling sound, not "easily described. It has its modifications; one by which the pre- "sence of danger is intimated, another a call when no alarm is "exhibited to the human ear; the difference of intonation is not "perceptible. In some instances these deer may almost be con- "sidered exceedingly stupid, and though so alive to danger in "general, at times display an inattention to the laws of self-pre- "servation that are quite surprising. On more than one occasion, "I have come suddenly on a hind returning from her night-tide,

" grazing in a neighbouring swamp, and the way in which the
" foolish creature would stand and stamp with its foot, staring at me
" all the time with both ears and eyes, was to say the least, astonish-
" ing. During this scene, I kept aiming at the animal, killing her
" over and over again in my mind's eye ! and thinking all the time
" what a chance it would be for a Slaughterer ! ! On one occasion
" fancying a stag might be near at hand, and hoping to prevent the
" hind giving the bell of alarm, I tried many dodges to get her *to*
" *move on ;* threw up my arms, took off and waved my hat ; jumped
" and danced about : the deuce a bit. Instead of quietly making
" herself scarce, she came on towards me, not being 30 yards distant
" all the time. At last I had to run at her and she let me come on
" some ten paces before she bolted, with one warning bell, into the
" sholah close by. I have but to remark that these instances, have
" only occurred with females. Are we to put it down to the natural
" curiosity prevailing with the softer sex at large ?

" And now, let me attempt to describe *my* idea of *how* to shoot
" the sambur. I must then, friend Editor, take you out with me
" for a stalk, and show you *how* it is or ought to be done. We will
" then suppose ourselves encamped on the Koondahs, some 20 or
" 25 miles from Ooty. You know what lovely scenery there pro-
" vails, especially near the ghâts ; I cannot even attempt to de
" justice to it. My pen would fail altogether to describe faithfully
" the grandeur of the mountains, the wonders of the precipices, the
" beauty of the cascades and waterfalls, and the magnificent forests
" that trend along the hill sides almost interminably, or broken
" here and there into open vistas of grass valleys or rolling swards,
" between the sholahs, where the wild denizens of the wood delight
" to bask, warmed by the sun and lulled to repose by the pleasant
" sounds of rustling leaves and falling waters. These spots must
" be seen, they cannot be pourtrayed by my feeble pen. Well at
" early dawn, or somewhat before when the morning star first peeps
" above the eastern heights, we start ; a cold and bitter east-wind
" blowing keenly in our faces, drawing tears from our eyes, and
" numbing our fingers and feet as we cross the neighbouring swamp,
" covered with hoar-frost crackling crisp under our feet. A brave
" morning indeed ; how strong and hearty does one feel ! how

"joyous the sensation that almost makes one skip from sheer light-"ness of heart! Such is the effect of this charming climate, this "climate of altitude so grateful to the toil-worn resident of the "arid plains. On we go, and ascend a stiff hill to reach a saddle "before we arrive at likely ground for our game. Just as we "reach the ridge to which from the other side the skirt of a "moderately-sized wood creeps up, we halt and peer across. To "our left; a knoll, beyond, the crest the tops of the trees of another, "wood appear; between the two woods an open sky line. Down "we drop on our knees, for, lo! on the line we suddenly spy two "pairs of ears and eyes intently gazing at us. A moment more a "fine stag stands on the sky line, a perfect picture. With beating "heart we scan him over through the glass, and pronounce his "head a poor one. The light is barely sufficient to detect clearly "the sight of the rifle; we raise it more than once, but with no "intent to kill. The stag still at gaze. Presently he moves on, "joins the two hinds, and all vanish from our sight. A look from "the blood-thirsty shikarri expresses his contempt of our merciful "act; nevertheless we hope for our reward!

"The reason these deer watched us so long was probably from "our having a bay pony with us, behind which we crouched; and "in the uncertain light, they did not at first distinguish whether "we were friend or foe.

"Let us proceed. We descend the side of a very steep hill "cross a burn at the foot, and mount a less precipitous rise sur-"mounting a sloping valley, where the deer love to dwell; but, "mark my friend, the wind has shifted we cannot proceed on this "favorite beat. We turn to our right skirting the corner of a "sholah, round which we know there is a long open sward, ter-"minating in a knoll, dotted here and there, and having on one "side a clump of Rhododendron trees all in full bloom, their deep "rosy clusters blushing more lovely than ever in the bright beams "of the rising sun. But see! there's something moving near the "green-wood trees. We all drop to the ground, and bring the "glass to bear; but it is not needed, for the next moment a stag "and two hinds quietly walk from under the trees on to the open

"hill. We watch them carefully. The stag carries on his "handsome head a trophy worthy to be won. They saunter "quietly round the crest of the knoll, evidently contemplating a "bask in the morning sun. On their disappearance we prepare to "start, but hold! what's this? look! what are those things, look-"ing like logs, lying near the trees to the left, and one here away, "some forty or fifty yards nearer? By Jove! they are deer! "Again we raise the glass. One, two, three, four, five! all hinds. "The shikaree whispers, "look to the right, where the stag was." "By the powers, he is right! three more! but not an antler "among the lot. All too in our very path to stalk the stag. What "shall we do? But see! the nearest hind is looking our way; "perhaps she has caught the sheen of our telescope and is alarmed. "She looks hard and long. Presently she gets up, stretches her-"self, and taking another searching look, she walks calmly towards "the rest. There is no outward or visible sign that we can detect, "yet one after another they all rise—no alarm, apparently, but in "less time than is taken in reading these few lines, the whole herd "has passed like shadows, and disappeared in the sholah near at "hand. Now is the time to make tracks, and away we go, walk-"ing swiftly but silently, and reach the spot where the deer "vanished from our sight. They entered the sholah on the left. "The stag we hope is down in his couch, to the right hand, close "to a wood on that side. Strange, that as we pass the point "where the deer had disappeared, not a sound is heard. It is "marvellous how the large animals of the forest can move so "quietly; even the lordly elephant when aware of danger moves "through the forest noiseless as the velvet-footed cat. We "breathe again. Thank goodness they have gone. We creep on, "for we have now reached the turning point of the knoll round "which we purpose stealing to meet our stag. Cautiously we "advance. By Heavens! more deer! Another pair of ears, and "beyond still another! Again we drop in the grass, and watch. "They are couched, and though not fity yards away, know nothing "of our presence. The movement of these deer will surely alarm "the stag. What can we do? Silently we crawl under the outer-"most bushes of the wood. They happen to be the myrtle, mis-

"called the hill-gooseberry. The fruit is ripe. We sit and watch "and eat. The deer decline to move. We tap our rifle stock, we "cluck ; they take no notice. At last we resolve to enter the "wood, and creep along to out-flank them. We do so in fear and "trembling, passing them within twenty paces. There are only "two, tempting shots indeed ! and who knows but the stag may "be off and away. Perish the thought ! We move on without "alarming them, and at last emerge from the covert, out of their "sight ; and now comes the moment of excitement in this phase of "sport ! Believe me, it makes me positively nervous, even relating "the tale. The hill side we now are on rapidly falls towards the "river below, where it rushes over a precipice, forming a grand "water-fall, beautiful to behold. The hill-side is covered with a "short scrubby rough leaf'd plant, about a foot and a half high. "Bending low we circle round the shoulder of the slope, beyond "the wood. The quick eye of the stalker-catches sight of a hind's "ears, at the very spot he hoped for. The stag must be nigh. "Down on all fours we move carefully along, the stalker keenly "watching the ears. A short distance gained and the hind detects "the movements of our heads. At the same moment the upper "tines of the stag's antlers are in sight ; he lies to the right of the "hind, about 120 yards distant, hidden by an inequality of the "ground. Be still, oh beating heart ! Be quiet, oh throbbing "pulse ! Steady ! oh shaky hand ! or all your toil is vain ! "onward yet only a few paces ! Be not alarmed, oh cautious hind ! "we care not for you. Crouching still lower, we gain ground ; "the head and neck of our noble quarry are in sight, the hind still "gazes intensely. Presently she elongates her neck in a most mar-"vellous manner. We still gain. On once more we move, when "up starts the hind. We know that in another moment she will "give the warning bell, and all will vanish. The time for action "has arrived ! We alter our position in a second, bring the deadly "weapon to bear on the stag ; quickly draw a steady bead, hugging "the rifle with all our might, and fire ! The hinds flash across our "vision like the figures in a magic lantern, and the stag—lies "weltering in his couch !

"There, my friend Editor, however imperfect and desultory this

"sketch of the sambur may be, I think I have redeemed my pro-"mise, in showing you *how* to shoot him.

"If you consider this worthy of publication in your excellent "little journal, I will try, on some future day, to give you an "account of the Ibex and how to stalk *him*."

HAWKEYE.

NOTE.—I have not heard that any one has as yet weighed the sambur. I see in the "Field" that a large stag in the Highlands weighs from 20 to 24 stone. I think we may safely calculate that the sambur stag will weigh at least 30. The flesh is good eating if kept sufficiently long. In the winter it keeps good for a fortnight, the head makes savoury pottage, the feet delicious jelly—liver is not bad and the steaks are *some* I can tell you—and marrow pudding is not to be despised, and tongue well salted is, as good as Reindeer's. H.

After this I fear any further account by me will read with terrible flatness; but, as I am on the spot and, to some extent, in all the excitement of the "*poetry of sport*," my friend HAWKEYE describes, I am tempted to tell what happened to me late this afternoon.

I am in the "Avalanche" bungalow on the Neilgherries, a spot stated by Jerdon, at page 289 of his book, to be an especial haunt of the Neilgherry wild goat, or ibex of Madras sportsmen. This bungalow is situated amongst the Koondas mentioned by Colonel Campbell in his "Old Forest Ranger*" and "Indian Journal," and is known to most of the visitors to Ootacamund.

Late this afternoon, while I was stalking ("*the poetry of sport*") for deer among these hills, I saw a small herd of samber, consisting of a magnificent stag, a smaller one, probably the "*fag*" referred to by my friend HAWKEYE, and a hind feeding near the foot of the high ibex cliffs on the lofty hill, about three miles to the "*half left*" as one stands facing from this bungalow: many a Madras sportsman must know the view.

I watched them for some time, perhaps three-quarters of an hour, until they were on ground on which they could be approached, and during this time saw, through my glass, a most amusing scene. Some herb, or perhaps, as far as I could see, some salt or soda which made them lick the spot attracted the hind who skipped up

* This book must not be confounded with the "Old Shikarry," which is by a very different author.—VAGRANT.

to it in a most playful manner, followed in the same way by the younger stag. The senior followed slowly and with great gravity first "*dunted*," (I know no word so expressive as that old Scotch one for the performance) the hind very ungallantly out of his way, and then turned his horns upon his junior who "stood up" to him for some time most bravely, but of course without success, although the joust lasted long enough to be a most interesting one and the entire picture of deer, rocky back ground, mountain scenery and mountain mist was one most worthy of Landseers's pencil.

The result of the stalk which followed was, that I got up to within a long shot of the herd, by that time joined by another hind, and broke the shoulder of the larger stag, who however managed to stumble down into a large "Sholah," as the hanging woods of these hills are termed by sportsmen, in which as dusk came on and being lost at night among the Koonda mountains, or any part of the Neilgherry hills, is no light matter, I had to leave him and out of which I fear I shall never get him.* A curious instance of what may have been conjugal affection, or perhaps the "feminine curiosity" mentioned by my friend HAWKEYE, happened just after my shot. Being beaten by the tremendous hill, and out of wind after a residence on the plains my hand shook, so that I missed with my first barrel and thus sent the herd galloping wildly along the hill side: the second shot however brought the big stag down on his head and knees: when he picked himself up finding that, in his crippled state, he could not get up-hill, the poor animal turned and staggered down to the wood beneath him; one of the hinds seeing her lord thus pull up, stopped herself and watched him; what were her reasons for this, I cannot imagine.

"Verily," as the "Old Forest Ranger" says, "there is no more gallant beast than a Neilgherry stag," and of all the boons that men should be ever thankful for, there are none greater than good health and good eyesight, so bountifully granted to many and so little thought of with gratitude to the bestower. I cannot think of any pleasure to exceed that of stalking for samber or ibex among the Koondah mountains: the climate and the scenery repay the

* I never saw him again; he got during the night into a still deeper and larger wood in which he probably fell a prey to a tiger. I saw and wounded a tiger near the spot next day.—VAGRANT.

sportsman even although he may not get blood, but assuredly he who follows this sport must not only have the eyes of a hawk, but own also legs tough as steel, and lungs like those of a Highland piper.

As I cannot describe the magnificent scenery of these hills in any language which could do justice to the subject, I shall make use of the following extracts, which I find in the *Indian Review* of 1837 on a "*Memoir on the Geology of the Neilgherry and Koondah* "*Mountains*—By P. M. Benza, Esq., m. d., *of the Madras Medical* "*Establishment.*"

As the author says, many of the apparent undulations "have thousands of feet of elevation," they are covered with grass, dotted with rhododendrons which in this month, November, are bursting into the full glories of their brilliant crimson flowers, so grandly that they attracted the attention of my gun-carrier, and be it remembered that the native of India, let his creed or profession be what it may, is singularly blind to the beauties of nature. These undulations, mountains, or hills, call them whatever the reader pleases, are divided by streams of the clearest water, every one of which has its own series of lovely and romantic cascades, and the banks of which are always more or less wooded; many of the glens, gorges and ravines on the hill sides are covered with very dense, although not very lofty forest. The climate is delightful, and to an old Indian there can be few sensations more delightful than feeling the grass and twigs crisp from hoar frost crackling under his feet, or that he has to guard against *cold* instead of *heat* in his sporting excursions.

But to return to Dr. Benza:—"Descending from the eastern "Koondah pass, and crossing the field, a little knoll is seen, traversed "by a basaltic dyke in an east and west direction; it is flanked by, "and has burst through, sienitic granite: crossing the road on "ascending the ridge opposite to the Avalanche, this land-slip comes "at once to view. There has evidently been no sinking of the "land in the declivity of the hill; but it seems that a thick stratum "of the rock, lying almost vertically on the declivity of the hill, "and between which and another the present rivulet runs, whose "waters having undermined the stratum (which might have over-

"laid thick beds of clay, the result of the decomposed rock), the "weight of the superincumbent mass, together with the almost "vertical position of the stratum, made it *slip*—hurling rock, soil, "and jungle into the valley below, leaving a deep ravine, bounded "to the north by a mural precipice of undecomposed rock, some "hundred feet high, and to the south by the remainder of the decli- "vity, which is seen undisturbed in its place, having the same alti- "tude as the opposite boundary." On ascending the Ghaut, the view from all points of the ascent is described as really grand, Dr. Benza does not recollect having seen anywhere such a wild, yet magnificent, spectacle as the ravine formed by the two hills— "the one of the Avalanche chain, the other one of the eastern "range of the Koondahs. The thick impervious jungle, extending "its whole length, occupies also the lower half of the steep declivity "of both the hills, and is then succeeded by the usual carpet-like "covering of dense turf, which extends to the very pinnacles of "their prodigious altitudes. While ascending this pass, at every "turn of the road a most striking and superb *coup d'œil* presents "itself—the nearly vertical side of the Avalanche hill, with its pre- "cipitous battlement-like summit—the enormous prismatic masses, "three or four in number, bursting, as it were, through the turf- "covered soil of the steep declivity of the hill; one of which, in "particular, looks like a huge martello-tower stuck to the nearly "vertical side of the mountain—while the magnificent ravine to the "left completes the striking view before us. This assemblage of "wild and grand objects cannot but produce sensations of wonder "and admiration. On arriving at the gorge of the pass, of course "the view, becoming more expanded and enlarged, has a superior "degree of beauty, particularly that of the extensive undulated table- "land, of which the Doodabetta group to the east, and the Koon- "dah and Himigala ranges to the west, are the boundaries. The "expression *undulated* table-land is used, because such is the "appearance of that track, of the country, seen from such a height, "although many of these apparent undulations have thousands "of feet of elevation.

"Sispara, or Murraypet, is at the head of the long and deep "ravine, enclosed between two almost perpendicular ridges; along "the side of one of which the ghaut is to be constructed. Lieut.

" Johnson, of the Engineers, makes the absolute height of Sispara
" about 5,620 feet."

Dr. Benza then reaches the huge peak-like mass of rock, a few hundred yards from the foot of the highest Sispara summit, which stands like a battlement on a wall. The view from this point is described as magnificent ; particularly that of the gigantic amphitheatre to the right, the termination of the Koondahs on this side.

" It is very striking to look at this stupendous semi-circular recess, " formed by enormously lofty mountains, the summits of which rise " vertically to thousands of feet, and whose abrupt sides are deeply " corroded by ravines and chasms, down which small but romantic " cascades precipitate themselves, adding to the magnificence of this " stupendous scenery. Jutting down towards Malabar, are two sharp " ridges, like balustrades to huge stairs leading to this gigantic door-" way, and which, gradually decreasing in height, sink at last in the " plains of Malabar.

" These plains form one view in the picture, intersected in all " possible directions by numerous water-courses, lakes, and tanks, " which irrigate these extensive tracts, the sight of which relieves " the eye from the fatiguing sensation produced by the wild moun-" tain-scenery above.

" Another, and perhaps the most picturesque view, is that of " the hills of Malliallum, which intersect a portion of the plain, " in humble but pleasing undulations of a bluish color ; the red " clouds hovering above, and the blue firmament surrounding them, " form a scene of great beauty."

Dr. Benza ascended successively three hills, one rising above the other ; covered as usual with thick turf, rounded, and quite easy of access even on horseback. After the third hill he came to a slightly sloping table-land, which forms, as it were, a gently rising pedestal to the huge pyramid of the peak. He thus describes the scene :—

" At last we came up to the gorge......What a view ! Who can " describe in words the scenery which burst all at once on our sight ! " I doubt much whether even the pencil could give, not an adequate " representation, but an approximation to it, of the terrific spectacle

" that came to view. To the south of where we stood, the northern " termination of the Koondahs rose in abrupt escarpments and verti- " cal precipices, to the enormous height of 8,000 feet, excavated and " furrowed by deep ravines. Sharp mural spurs project from their " rugged abrupt facades, like so many props for the support of those " gigantic walls ; some of them, thousands of feet high, have not " breadth proportionate to such an altitude ; and they decrease, as " they shoot upwards, to an oblong sharp edge, forming the summits " of these wall-like escarpments.

" A sentiment of deep wonder must influence the beholder of " such wild solitude and grandeur, rising majestically above the " tame, monotonous plains of Malabar. I never saw such im- " pressive mountain scenery before, Sispara's amphitheatre not " excepted, which is too small, too tame and regular, to bear " comparison with this.

" Having admired this stupendous spectacle, we thought of " scaling the peak. I must say a few words of this extraodinary " excrescence, which shoots up from the very edge of an abrupt " precipice, and raises its perpendicular facade above five hundred " feet. On the very brink of the escarpment, which forms the " western termination of the Makoortee range, this peak rises, " suddenly, in the shape of a cone split into two equal parts from the " apex to the base, one-half having been hurled down to the plains of " Malabar, the other stuck to the brim of the precipice, and having " its split facade in a line with the escarpment, like a gigantic " battlement.

" This abrupt mural precipice, on the south side, is continued " with the northern end of the Koondahs ; yet a spur shoots out " from it in a westerly direction, making a segment of a circle, the " concavity of which looks north. Along the escarpment of this " curve the other two peaks stand in the same manner, and having " the same from as the highest one, but of smaller dimensions.

" The distance between each of these peaks cannot exceed four " hundred yards. At the termination of this precipice there is an " isolated column-like hill, which raises its lofty summit from among " innumerable huge masses, heaped up in the greatest confusion " imaginable—the ruins and wreck of its own mass.

"The highest peak cannot be more than five hundred feet above "the verge of the escarpment; the eastern and south-eastern sides "have a gibbous configuration, and are perfectly easy of ascent, the "horizontal positions of the stratified rock forming it into steps. "When half way up we sat down—my companion with his pencil "to take a view of the romantic recess of the Koondahs, and I to "gaze around me. Fearing giddiness, I did not attempt to walk "to the brink of the precipice, but I crawled for the last twenty "yards, and when near the Swamy, which stands at the very pin-"nacle of the cone, I sat down; and, after a few minutes' rest, I "crept on all fours to the brink, projecting my head only beyond "the precipice.

"How can pen describe the horrific confusion at the bottom of "this awful abyss! Huge masses, portions of mountains I should "say, lay scattered, or heaped up, in frightful disorder, at the foot "of the parent mountain, which rises, like an enormous column, "hiding its lofty summit in the clouds.

"I could not gaze at this frightful scene more than two or three "minutes; and I retired creeping back to the Swamy, where we "enjoyed again the sight of the recess of the Koondahs. We regret-"ted that the clouds, which began rolling along the plains of Mala-"bar, soon deprived us of the pleasure of admiring the mountainous "scenery and the plains at the same time.

"After a few minutes we began our descent, and had a few more "glimpses of the recess, according as the cloudy curtain was, every "now and then, withdrawn. We went round the base of the peak "to the northern gorge at its foot, and, from this place, the vertical "facade of the peak is seen to great advantage. The apex of the "cone appears to overhang the base, and the face is rather concave. "From this place I could at ease contemplate and admire, without "fear of giddiness, the romantic scenery before us.

"From this altitude we occasionally looked towards the east at "the Cantonment, of which we could distinguish some of the houses, "and to our tents, the way to which appeared, from such a height, "quite easy and smooth—*facilis descensus*—so that, instead of "retracing our steps, we choose to descend the side of the hill (N)

" a continuation of the peak. Here my labors and fears began ; I
" never scrambled down precipices so nearly perpendicular to the
" horizon as I was obliged to do on this occasion."

During the rutting season the loud and somewhat metallic sounding bellow of a samber stag can often be heard, for an almost incredible distance, reverberating among the almost silent solitudes in which he generally dwells. Of course in forest one cannot judge with any degree of accuracy where the spot is from which such a sound proceeds : but, when I have been out in an open moor, I have heard a stag roaring on a hill at least a mile from me. The clear air of the mountains may have carried this challenge further than it would have travelled in the plains and, although I did not remark it at the time, the wind was probably from him to me, and there was not any other sound, except perhaps the song of a sky-lark, to divert my attention. The call of the hind is a faint grunting "low."

I have heard these calls both by day and at night, but there is another cry ; a sharp and ringing snort, or signal of alarm which has even a still more metallic clang than the bellow of the stag and which I have never heard except after sunset. It is, I fancy, used by both sexes, and the native hunters affirm, that, it is only uttered when the deer know that a tiger is near them. A few days ago I attempted to combat this notion, as a samber, which was, I suppose, feeding near the edge of a copse, on hearing my gun carrier and me returning home just after dusk, uttered this cry and then crashed into cover. My man was however firm in adhering to his opinion ; he reminded me, and with truth, that we had only half an hour before heard a tigress and her cub calling to each other not far from the spot, and said, perhaps with some reason, that this deer had been made nervous by hearing these, to it of course, most awful sounds and, without waiting to look at us, had jumped to the conclusion that we were tigers and had given an alarm accordingly. He added, as an apology for this mistake on the part of the deer, that it was probably a young hind which had not yet had a fawn ; concluding very ungallantly however with a remark that, under such circumstances a deer is like a young woman, therefore not likely to form a correct judgment on things in general.

They are good men and true, after their savage fashion, most of these native hunters ; their open-air-life and habits of observation and self-reliance cause them, no matter what may be their race or origin, to become far more manly, plain-spoken and independent than any other Easterns I have ever met. And if they gain confidence in, or take a fancy to an employer who can understand what they say, they are not only instructive but most entertaining companions while going to and fro the sporting ground, once there and "*on duty*," so to speak, talking is of course out of the question. They are from necessity and training, keen observers of nature, and their wild life probably makes them superstitious, and although they are generally far more silent than other natives, when drawn out they are able to give information most interesting to a naturalist regarding the habits of bird or beast, and able to tell many a quaint and distorted legend of devilry or witchcraft, or many a grim tale of horror connected with deeds of by-gone days, or of the gang robberies, murders and torture of the present.

I own that I have passed many a pleasant moment in talking to these men and have a great regard for them, often for the same idle reasons that Lord Marmion loved "*Palmers*" for like :—

"* * such holy ramblers ; still"
"They know to charm a weary hill,"
"With song, romance, or lay ;"
"Some jovial tale, or glee, or jest,"
"Some lying legend at the least,"
"They bring to cheer the way."

At any rate, if they are not always ready with "song romance or lay," they are seldom at a loss for the last of the accomplishments Marmion set such store by.

No. 59.—Axis Maculatus.

JERDON, No. 221, PAGE 260 ; SPOTTED DEER.

I cannot agree with Jerdon that there are two species of spotted deer ; may not the differences in size, shape and horn mentioned at pages 260 and 261 of his book be attributed to climate and the forest the animal has to feed in ?

Are not the forests of Ceylon and of some parts of Malabar more clear of underwood than many of the dense thickets of upper

Indian woods ? I have always fancied that deer, both of this species and the samber, found where there is much underwood, therefore more secure cover and perhaps richer food, are heavier, better furnished in every way and darker in color than those of more open forest. The shape and size of the horns of samber vary much, so does the color, this is allowed by Jerdon at page 257 of his book, and yet he appears to agree with Blyth and Mr. Elliot, in considering these differences to be all varieties of the same species. Besides the differences in shape of horn of samber I have seen two hinds almost a light dun in color. The horns of the common antelope likewise vary much in size and divergence, so also do those and the markings of our domestic cattle whether from Ayr or Devonshire, the Highlands of Scotland or Alderney.

I argue from these grounds therefore that there are hardly sufficient reasons to consider that there are two distinct species of this beautiful deer.

Spotted deer take readily to water, whether to escape their foes, or to and from their feeding grounds. Substitute for the red deer a spotted stag ; as beautiful, although not so stately an animal, and for the Highland tarn ; a woodland lake among the pestilential but lovely hills of the Golcondah Zemindary, and I saw the story of Landseer's well known picture, " The Sanctuary," acted in the life.

While after red jungle fowl, Gallus ferrugineus vol. 2, page 536, of Jerdon's birds of India, I saw a flock of wild ducks feeding near the edge of a lake and, as I was getting up to them, a spotted stag deliberately cantered down to the opposite beach and swam directly across to where I was concealed, passing through the wild ducks, some rising, others merely paddling out of his way exactly as is represented in the picture. The stag landed, the water raining from his glossy flanks as he shook himself after reaching the shore, and then cantered lazily away. I had left my rifle with an attendant, but all this was so close to me that the shot-gun was more than once brought to bear on the noble beast's head, with an idea that he might be stopped. Had the pellets been No. 3 instead of No. 5, or an Ely's cartridge been in the gun, the trigger would have been pulled with the almost certainty of a kill ; but as it was, I had not heart to mangle or blind the beautiful animal.

By far the finest spotted deer I have killed was in Goomsoor; where, as in every other part of Orissa, both spotted deer and samber are, I think, more than usually large. This animal had a magnificent head, with the longest and widest spreading horns I have ever seen but, as they were in velvet at the time and their points were smashed to a bloody pulp in the expiring struggles of the poor animal, they could not be fairly measured.

I have been told by a brother officer, who is probably the best authority on such matters and the best known and most accomplished sportsman in Southern India, that on the slopes of the Neilgherries and the other mountainous ranges of that part of the country, spotted deer do not ascend the hills higher than the line of bamboo. How high this limit is, I cannot say, probably about 3,500 feet. In the Northern Circars I have killed spotted deer in the hills above Goodum and seen them at many other places in the mountains of the Golcondah Zemindary, among which I was at one time employed on field service, or, as a brother Sub said, "in "hunting black fellows and catching fever," and although, I can from dire experience testify, that these hills are not above fever range, I think that they must have been upwards of 4,000 feet above the level of the sea. I may be wrong however in my estimate of this height; for I had no means of judging beyond those afforded by the eye; the delightful climate, treacherous and almost deadly though it be, the vegetation and birds. But I have been assured by a highly scientific officer employed in the General Survey of India, who is well acquainted with every part of the Northern Circars, that in the Vizagapatam Agency, of which the Golcondah Zemindary is a portion, many of the mountains rise to above 5,000, and the highest up to 5,500 feet above the sea.

When writing of the spotted stag swimming across the lake and landing so close to me; I should in the proper place have mentioned as an excuse for not having at once changed the charge in my gun, that breach loaders were not then in fashion, and I valued my pet Westley Richard's far too highly to risk, for a deer, the damage which slipping a bullet over the shot, might have caused.

During "*beats*," for peafowl and other smaller game, I have however twice fired at, and on both occasions killed full-grown

spotted deer with Ely's cartridges, (No. 4,) from the same gun, a 14 bore, out of which however I often on such occasions shot with No. 13 wads and Ely's cartridges which, by doing away with the windage, I fancied, made the weapon hit harder than it would otherwise have done.

The first deer, hit in the neck as, before it made up its mind to rush into the open, it stood about twenty yards from me, fell on the spot. The other was galloping past me at a distance of perhaps thirty-five yards ; it also was shot in the neck, and rolled over much as a hare under similar circumstances would, it got up again however, and although it did not run far, it managed to get into some thick brushwood and was not found until the following morning.

No. 60—Axis Porcinus.

JERDON, NO. 222, PAGE 263 ; HOG DEER.

I can corroborate Jerdon's statement, vide page 263 of his book, that the young of this deer " are beautifully spotted," but although I must have seen many adult specimens dead and alive and still more of the skins, while I was in Burmah. I do not remember having remarked the few white spots which he says, many of them assume in summer. I think that the fawns lose their white spots when they are about six months old.

There is a very interesting hybrid between this deer and the last, now (August 1868) in the People's Park at Madras :—

In 1865, I sent from Rangoon to Madras a pair of very fine hog-deer, which were unfortunately sent to the paddock in the People's Park, instead of, as I hoped, being set at perfect liberty to breed in the Government Park at Guindy. The animal is not, I believe, to be found anywhere in the Madras Presidency, and the experiment would not only have been an interesting one to a naturalist but, from the excellent cover Guindy Park affords, and its great extent, one almost certain to have succeeded. I cannot find any authentic proof that the hog-deer has ever been found in the Southern India. At page 263 of his book, Dr. Jerdon writes as follows :—" It has

"been stated to inhabit South Malabar and Ceylon, but the race
"from the latter country differs somewhat and is probably distinct,
"and neither Mr. Blyth nor myself have actually seen specimens
"from Malabar, although I was resident in North Malabar for
"some time."

I imagine that Mr. Blyth's and Doctor Jerdon's informants alluded to the little mouse-deer "Memimna indica," No. 225, page 269 of Jerdon, which from its peculiar action and color so much resembles a young wild pig, vide page 121 of these notes, that it is often erroneously termed "hog-deer," by the sportsmen of Southern India, and in fact all over the Madras Presidency.

On the hog-deer being put into the paddock in the People's Park the male was killed by a spotted stag which appropriated the female; the hybrid fawn just mentioned was the result, and the little hind was in fawn again to the same stag when she died a few weeks ago. The young hybrid, a female I think, is of a darker color than the sire, with fainter spots, carries her head low like her porcine mother, and thus runs with the back apparently much arched, the ears struck me as being larger than those of a spotted fawn of about the same age or size. It will be interesting to note, whether this little hybrid will continue to interbreed with her spotted relations.

The hog-deer when in proper condition affords excellent venison, and when I first knew Shuaygheen on the Sittang river in Pegu, a place where mutton was not to be had, this venison and that of samber and perhaps that of the brow-antlered rusa under the name of samber, were almost the only changes from the daily ration beef, or fowls, our caterer could procure for the little detachment mess which we established in the pretty, but unhealthy stockade in which we were quartered. When in long grass, hog-deer appear to squat as closely as a hare does. While snipe or jungle-fowl shooting in Burmah, I have on different occasions walked almost on to hog-deer; which must have heard me firing near them without moving from their forms until they could not avoid doing so.

When hunting is introduced into Burmah, as I feel sure it will be, ere many years, these deer will, I doubt not, give many a run before mounted spearsmen and greyhounds.

Great numbers of these deer are each season killed by Burmans ; being mobbed with dogs ; half-bred greyhounds of which a great deal of care is taken in Pegu, or by means of the bell and flame decoy, to which they sometimes are attracted so near (I have been assured by Burmans and Europeans who said they had seen them thus killed) as to be cut down with knives or rather the long handled swords used by the natives of Burmah, and from what I have seen of the way animals are seduced to destruction by this detestable mode of poaching, which I shall not attempt to describe, I see very little reason to doubt the correctness of the statement.

"*Low belling*," evidently derived from the north country word "*Lowe*," a flame, seems however to have been a crime pretty generally known to the poachers of all countries, and to have been perhaps the most deadly of all the many villainous methods of murdering game.

In a rare old book I possess : "*The experienced Fowler ; or, The* "*Gentleman, Citizen and Countryman's pleasant and profitable* "*Recreation*," printed at the "*Blue Bell*" and at the "*Ring*" in "LITTLE BRITAIN" in 1697, and written by the "*Reader's*" "*Friend* "*to Serve you*"—"*J. S. Gent*,"* that quaint old poacher, not one whit ashamed, gives most detailed instructions for this, among other "*Recreations in the Art of Fowling*," which he says he lays down "*in so Easie and intelligible a manner as cannot but be* "*agreeable to all persons who desire to be skilled in Experiments* "*inserted* "not only from his" *own Experiences but those of the* "*most Cunning and dexterous Proficients*."

Poaching is fast clearing off game all over India, and will 'ere long injure British Burmah in like manner : so that it behoves every one who has at heart any sportsman-like feeling of fair play to hope, that game laws may soon be introduced into both countries. All the ideas, records and legends of the people of India are in favor of the right of the governing power for the time being to preserve game by laws far more stringent and arbitrary than any we would issue. Game laws therefore would be received by them without a murmur, and as the people themselves would

* In 1697 this word probably had a different signification somewhat differing from that which it bears in 1869—VAGRANT.

have no idea of breaking these laws, they could be enforced without hardship to any one or any temptation to crime.

The rules need be very simple ; merely to prevent any one selling game, dead or alive, without a license, or at all, or killing or snaring it during certain close or breeding months, which would of course vary slightly in different districts, and which should therefore be fixed by local authorities. We have at home fixed dates for killing certain kinds of game ; it would be very easy to do the same in India.

All guns should of course be taxed, and so should dogs of every kind. The common and nearly ownerless dogs of the country are so great a nuisance that each year rewards of, I think, two annas, or three pence for every dog, and three annas for every bitch are paid for their destruction. There cannot be any good reason why dogs should not add to instead of taking from the public purse.

Laws should be strictly enforced, that no one, head of a family or school boy, black or white should, be allowed to fire at game bird, or beast without a license.

No. 61.—Cervulus Aureus or Muntjac.

JERDON, NO. 223, PAGE 264 ; RIB-FACED OR BARKING DEER.

I can corroborate Jerdon's description of this animal, when he says at page 265, that "It carries its head and neck low, and as its "hind-quarters are high, its action in running is peculiar and not "very elegant, somewhat resembling the pace of a sheep, hence its "popular but very erroneous name in Southern India," or as he terms it elsewhere, "*Jungli-bakra*, vulgo of Mussulmans of "Southern India, hence the name of *jungle sheep* in the Madras "presidency."

I fancy that the Teloogoo name, "*Kukagori*," mentioned by Jerdon at page 264, is however derived from its barking call and red color which somewhat resembles the hue of most of the common pariah dogs of India.

Until it is decided that the barking deer of India is distinct from the muntjac of Java, why give them different names ? Messrs.

Blyth and Elliot, vide page 265 of Jerdon, are good authorities for considering them the same animal: surely changes in season, feeding and climate may make the differences in color and size observed by some writers. Many names for the same animal are very likely to puzzle and dishearten sportsmen who should be able to afford assistance to scientific naturalists.

The natives of India assert that this little deer utters its peculiar barking cry only when it comes on the scent or tracks of a tiger; but how far this notion is even founded on fact, I cannot say. I have heard "the curious rattling noise, like that from two pieces "of loose bone knocked together sharply;" mentioned by Colonel Markham, page 265 of Jerdon, and a brother sportsman, who had never read his book or Jerdon's, when speaking to me of this noise, compared it to the sound of "a pair of castanets." I think I have also remarked it as a spotted deer broke past me; but with reference to this, I probably was mistaken, as it is possible that a muntjac may, unperceived by me, have been on foot at the same time.

Colonel Douglas Hamilton, the brother sportsman to whom I am indebted for the remarks at page 79 of these notes, has suggested to me that this extraordinary noise, which I do not think has yet been accounted for, may be caused by the long canine teeth. He pointed out, that these teeth, in the muntjac, are not rooted firmly: but are movable, so to speak, or rather they are so loosely fixed to the jaw, that they appear at the will of the animal, to be capable of being placed at a different angle, both in a lateral and a forward direction, to the extent of half, perhaps three-quarters of an inch in the former, less in the latter. This power of moving his long canine teeth at will, must greatly aid the muntjac in using them in self-defence. Colonel Hamilton told me, that, when they were attacking a male, his dogs have been severely wounded by these scimitar-like weapons. We have just examined the head of a male muntjac which he has killed when we have been shooting together on the Neilgherries. That this power of moving the canine teeth exists, neither of us has the slightest doubt. When the tooth is in its quiescent state and close to the jaw, it can be of little use as a means of defence, but when raised laterally it forms an angle with the jaw and so becomes a very formidable weapon.

I can corroborate the statement, page 265 of Jerdon, that the venison of this deer is excellent, and all the more so when the absence of fat he mentions is made up for by mutton fat being wrapped round the joint to be roasted.

Hodgson, as quoted at page 265 of Jerdon, gives an excellent idea of the way in which this active little deer, which is to all intents the "*roe*" of India, gets through web-like labyrinths of brushwood, or thorn, or a net-work of knotted creepers and grass, when he writes as follows :—"It has no powers of sustained speed and "extensive leap, but is unmatched for flexibility and power of creeping through tangled underwood. It has indeed a weasel-like "flexibility of spine and limbs enabling them to wend on without "kneeling, even when there is little more than six inches of per-"pendicular passage room, thus escaping their great enemy the "wild dog."

Jerdon's other remarks regarding the habits of this pretty little deer are so well corroborated by my friend HAWKEYE, that for the reasons mentioned at page 91 of these notes, I shall not hesitate to enrich my book with his description. HAWKEYE writes thus in the *South of India Observer* of the 24th of September 1868.

THE JUNGLE SHEEP.

"In wandering over these beautifully wooded mountains in search "of game, the sportsman, if new to India, is startled at times by hear-"ing, in the deep glens or hanging sholahs, a hoarse discordant "roar, repeated at times rapidly, at others at intervals, now near, "now distant, sometimes deep and harsh, like that of some ferocious "wild beast, at others shrill and more like the bark of a wild dog ; "this is the voice of the Jungle Sheep or *Muntjac*, a beautiful and "graceful specimen of the deer tribe, frequently met with on these "hills, and in the forests and jungles of the plains below. It is "surprising to hear so loud and threatening a sound from so gentle "and timid an animal as the little Kakur, or barking deer as it is "also designated. It has been observed, before going to couch, to "roar in its peculiar manner, for a long time* for what purpose is "not known, perhaps to intimidate its enemies. At a distance it

* Colonel Douglas Hamilton tells me that he remarked this on one occasion.—VAGRANT.

" looks such a remarkably pretty creature, elegant and lady-like, " so to speak, in its actions, that it seems almost a pity to shoot " the poor little thing. On a closer inspection, however, it will be " found to have a somewhat repulsive countenance, from two dark " lines down each cheek, which, added to a tuft of black hair above " the eyes, gives the face of the female rather a ferocious aspect, " but not indicative of its character, which is that of excessive " timidity ; and so thoroughly frightened does it become, when " chased by dogs or men, that instances have been known of its " being actually caught uninjured by rushing into the arms of the " beaters ; at times, however, it does bear out its appearance of " ferocity, the buck being armed with long canine teeth in the " upper jaw, with which it has been known, when wounded, to " lacerate severely and dangerously the dogs that attacked it. Like " the Roebuck of Europe, it is exceedingly cunning when hunted " by dogs ; squatting suddenly at the edge of a wood, it lets the " hounds run almost over it without moving, then suddenly rushing " back, it breaks away on the opposite side of the sholah, and thus " often escapes. It is a difficult animal to shoot ; at any rate, I " have found it so, for oft-times have I missed the little creature, in " its rush from one sholah to another at lightning speed ; and it is " decidedly difficult to stalk in the open. When feeding, it generally " keeps pretty close to a wood, bounding to the cover when aware of " any danger ; sometimes when shot at and missed, it rushes away, " keeping up a succession of its hoarse cries, as if to intimidate its " pursuer. I have mentioned, in a former letter, the difficulty of " distinguishing the several intonations of the peculiar " bell" of the " samber, and it is the same with this animal ; whether the bark " or roar be that intimating danger and alarm, or the simple call of " one sex to the other, or the mother to its young, is unknown, and " quite undistinguishable to the human ear. These deer are seldom " seen, except in pairs. Very generally they are solitary ; three " have been now and then met with, supposed to be the two parents " with a young one. They are never in flocks like the ibex, or " spotted deer. I have before alluded to the extraordinary power " of communication of alarm, without any outward or visible sign " observable, possessed by animals in their wild state ; this is to be " noticed in the simultaneous rise of a covey of partridges, or

" flight of wild fowl ; and so it appears with the animal we are " treating of. An instance occurred, not long ago, which struck the " observer at the time as very curious : three jungle sheep were " grazing, outside a small wood, some twenty or thirty yards apart ; " the stalker was watching his opportunity, when either by a slant " of wind or quickness of vision, his presence was suspected,—the " animal furthest from the other two caught the alarm, quietly " walked down to the next one, appeared to whisper something in " its ear, and away *all three* bounded, in their peculiar manner, " and disappeared into the sholah. I have heard, indeed I know, " of a similar case with elephants, where a large herd, assembled " under some high trees, during the heat of the day, received this " mysterious communication of alarm from a female, some forty " yards away, without apparently any noise or distinctive action " on her part, to give rise to the immediate alarm and dispersion of " the herd, that instantly took place ; it was marvellous ! But to " return to our deer. It is curious to observe it, when not alarmed, " on changing its ground form one wood to another, or coming out " to feed in the evening, how daintily and warily it steps, lifting " each leg well above the grass or leaves, and noiselessly, as a " phantom, moving along, glancing here and there, with its bright " eye alive to the slightest noise or movement in its neighbour-" hood. The buck jungle-sheep has a small pair of horns, which, like " the samber, are shed yearly. They are neat and pretty, and the " head itself, if well preserved, is a fitting ornament for the mantle-" piece, or as a stand below a picture frame.

" The general mode of beating for this little animal is the same " as that observed with samber. A wood is surrounded or com-" manded at various likely sports, and the beaters and dogs sent in, " either above or below, according to the nature of the ground, or " the vicinity of other woods ; and the deer shot as it breaks " away. He is a good shot, who can kill a jungle sheep at speed " with a single bullet.

It has been now clearly established that the muntjac, like other deer sheds its horns annually ; but this does not appear to have been fully ascertained until lately, as at page 184, vol. 3, of The Naturalist's Library, there is the following remark evidently

caused by the fact of the horns being elevated upon small pedestals of bone, or as is elsewhere remarked, surmounting a fixed horn.

"It has been observed by some naturalists, that we remain in "uncertainty whether the muntjac sheds its horns once only, or "yearly. If the former was the case, it would show a beautiful "gradation of structure between the true deer with deciduous horns, "and those animals where they rise from the bone of the forehead "and are persistent."

Jerdon says, page 265, that it is "easily stalked," but I beg leave to differ with him in this respect, and record my corroboration of HAWKEYE's idea that it is "decidedly difficult to stalk in the open." HAWKEYE's description of the dainty and wary manner in which in stepping, it lifts each leg above the grass or leaves and so moves noiselessly is excellent, and like all his writing, evidently drawn from the life and from personal observation.

I have this morning (Neilgherries, 5th February 1869) watched with much interest the wary manœuvres of a buck muntjac which appeared in an open spot on a hill lower than the one where I sat looking out for a samber stag. The little creature was out of shot, and as far as I could judge in perfect safety, yet it is impossible for me to describe the excessive caution with which he moved; always before shifting his position, watching most anxiously with eyes and ears for the slightest sign of an enemy and again after apparently in play, skipping a few paces, stopping and then stealing on timidly and noiselessly. Suddenly he turned and fled for his very life to the covert whence he came. The wind was from him to me, so that I knew I was not the cause of alarm and for some time I could not account for it. At last I remembered that my horse-keeper had, nearly an hour before, led my pony across that hill-side. The morning, in hunting parlance, was a bad scenting one, and over that dry and open hill-side came a strong and keen nor-easterly wind that should very soon have carried off all taint of man or pony, yet the pretty little deer caught the faint scent that could have remained with a rapidity marvellous to any one who has seen hounds puzzled.

Jerdon says at page 266, that the "tongue is very long and "extensile, and that the animal often licks its own face with it."

I have also remarked this habit: perhaps this long tongue and the movable canine teeth being smacked together, may cause the curious rattling noise of loose bone I have mentioned.

No. 62.—Memimna Indica.

JERDON, NO. 225, PAGE 269; MOUSE DEER.

This curious little deer is not uncommon in the Orissa forests, and few beats for large game, are got over without some being seen; although, as they are much too small for ball practice, they are not often killed, unless by the beaters, who sometimes mob them, or knock them over with sticks. Their color and action remind me much of a young wild pig, but I suspect that the latter would beat them easily, could the speed of each be tried.

The venison is excellent, but it has sometimes appeared to me to have a slightly musky taste, possibly however this may have been mere imagination on my part.

As Jerdon says at page 269 of his book, the action of these little animals is "very inelegant," this and their resemblance in color and stripes, or spotted markings, to a very young wild pig, have caused many Madras sportsmen to persist in erroneously terming them "hog-deer," a name which should only be applied to the porcine axis, page 262, No. 222 of Jerdon, and thus, as I have tried to point out at page 112 of these notes, some confusion has ensued, and even authorities so good as Jerdon and Blyth have been led to suppose that the true hog-deer is to be found in the Madras presidency.

I believe that this little deer is very easily tamed; but I do not think that I have ever seen it in captivity. From its beautifully marked skin and minute size, however, it should be a very favorite pet.

It is very little larger than the common Indian hare, and may well be termed the mouse-deer, for its weight—Vide Jerdon, page 269, is only "from 5 to 6 lbs.," whereas a large specimen of the bandicoot rat, "Mus bandicota"—Vide page 193 of his book, weighed 3 lbs.

Although by no means uncommon, this little deer does not seem to be well known except to sportsmen who have been much in the forests it frequents. If I remember right, there is a very good picture of it in one of the Oriental Annuals.

While I was in Orissa, I have often heard the native ideas regarding the animal walking " on the tips of its hoofs," leaning " against a tree to rest," and being " said not to go out much about the fall " of the leaf, as its sharp hoofs penetrate the leaves which clog its " movements," mentioned at page 270 of Jerdon.

Of the latter fancy, I can only say, that I think, I have seen these little creatures at every season of the year, but only when they were " put up" accidentally by beaters who were employed in trying to rouse more important game.

No. 63.—Portax Pictus.

JERDON, NO. 226, PAGE 272 ; NIL-GAI.

Doctor Jerdon concludes his description of this animal by remarking, that he quite endorses the opinion of Blyth, Ogilby, and other naturalists, that the nil-gai was probably the " *hippelaphus*," horse-deer, of Aristotle and not the samber deer to which that specific name has been given. The natives of Orissa, where, although I have never succeeded in seeing the animals, I feel sure they are sometimes to be found, always speak of them as *wild horses* ; I do not wonder at the idea, for I have myself on two occasions mistaken for a pony, a blue bull, as the iron-grey male is generally termed by sportsmen, as he was standing in the shade of a tree and facing me.

The general appearance of these animals might, in several points, induce a hasty or an unthinking observer to suppose that they were related to horses ; for instance the deep neck, and short back which slopes downwards from high withers, the short, erect, black mane, long and tufted tail, which somewhat resembles that of an ass, the varieties in color, I mean that the males vary from different shades of iron-grey to an almost black color, and that the white markings might, by such an observer, be spoken of as piebald, while the females and young males, described by Jerdon to be " tawny or light-

brown," might very easily have their different shades said to be dun, light chesnut or bay, as the case might be. The short horns, to be found only in the males, rarely exceed, or even equal, the length of the large, broad ears by which at a short distance they might be nearly concealed, as the nil-gai with his head well up stood at gaze.

The nil-gai too, is larger than any pony. In the Deccan, I killed a large blue, indeed almost black, bull, or buck, whatever the proper name may be, that from the rough measurements we made in camp was supposed to have been nearly fourteen hands and two inches in height or as tall as most Arab hunters of former days, but as I see that Jerdon, at page 272, gives four and a half feet, or thirteen and a half hands as the maximum height ; I fancy we may have been mistaken unless he does not take into consideration the lofty and somewhat horse-like withers.

I do not think that we were much in error however, and I am strengthened in thus holding to our former measurements in consequence of having been permitted by Colonel Douglas Hamilton to mention that he killed in Coimbatore a blue bull, fourteen hands and two inches in height.

I see that, vide page 272 of Jerdon, the Gonds call nil-gai, "*gúrayi*" and "*gúriya,*" both of which words sound as if they were derived from the Hindoostanee word *ghora*, a horse.

I think that they generally are in small herds, rarely more than ten in number, often fewer, and I have found them in pairs. With these herds the younger males are not often seen, being I suppose, driven off by the lord of the harem. As with other antelopes these young males (bulls they are and with some reason more often termed than bucks) appear when expelled to form, at particular seasons, into separate and much larger herds than their seniors.

In Bundlekund, during the month of January, after a long stalk having succeeded in getting within shot of a young bull which I fancied to be a solitary one ; I was almost run over and trampled under foot by an immense herd, I suppose not far, if at all, short of fifty in number, that I had not seen and that, on being startled by my shot, all galloped down the narrow gap in a ravine up which I had crawled. They were all young males and appeared in great

glee, utterly regardless of their unfortunate comrade left struggling on the ground ; they reminded me much of a drove of young Highland cattle as they rushed past within a few feet of me, stirring up much dust and, with their tails up, butting and kicking at each other.

Had breech loaders been in fashion at the time, I might easily have secured another, if not two, of the herd.

This herd of nil-gai, with the exception of the bull I at first stalked, must have been taking shelter from the broiling heat of the midday sun among some acacia (or mimosa* if that be a more correct term) bushes near them.

I can hardly endorse Jerdon's remark, at page 273, that except during the hottest weather, the nil-gai is indifferent to the sun. I think that they are not to be found unless where there are bushes or thin forest sufficient to give them shelter during the day, and that they avoid actual exposure to the sun as much as almost any other animal ; except perhaps the British soldier, the British sportsman, and the vulture, all of which appear at times to think that they can brave it with impunity. I certainly have often found nil-gai, the large bulls especially, taking shelter under trees during the heat of the day.

They then reminded me much of the picture of the "brindled gnoo, or kokoon, Catoblepas gorgon" in that magnificent work the "Portraits of the game and wild animals of Southern Africa," by Sir W. Cornwallis Harris, of the Bombay Engineers.

The flesh is generally almost uneatable although the marrow is excellent, but I must own that I have tasted most undeniably good beefsteaks cut from a blue bull.

I believe that the Coimbatore and Salem collectorates are almost the only places in Southern India, in which nil-gai are to be found. It is difficult to account for the animals being thus so widely divided from their usual haunts unless as has been generally supposed, these Southern specimens are the progeny of a semi-domesticated herd, which, at some by-gone period, had escaped from the preserve of a native potentate.

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* The "*babool*" of Indian sportsman.—VAGRANT.

Their resemblance to cattle has always deterred Hindoos, to whom the cow is a sacred animal, from molesting them ; while the bare idea that they were the private property of any great man would have been safeguard sufficient to prevent their destruction by Mahomedans and others who eat beef ; for there cannot be any people more willing to accept, or more implicit believers in the right to issue, game laws than are the various Indian tribes, all of whose records and legends grant to their rulers unlimited powers in this respect.

It is both for the cause of sport and of agriculture, much to be deplored, that we do not establish some laws in this respect, or at any rate that we do not make it penal to kill certain animals, or birds during the breeding season, or to sell them at any time dead or alive without a license.

Setting the feelings of a sportsman aside, a little protection to insectivorous animals, and birds, foxes and partridges for example, would be of immense advantage to the husbandmen.

The indiscriminate destruction and capture of game of all kinds by natives during the breeding season is fast clearing off many of the most useful allies of the Eastern farmer.

A wounded blue bull at bay is a very fine-looking animal and one that should be approached with some caution, for at such a time he will charge home very gallantly at either man or dog and, like all others of the deer tribe he can when so inclined, make excellent use of his forefeet as well as of his horns. I remember a notable instance of this ; in a large bull, whose foreleg I had broken just below the shoulder. Notwithstanding his wound however, he got away so fast, that I do not think I should ever have seen him again, had not a large red pariah dog, with sporting instincts most unlike those natural to his ignoble race, joined in the pursuit and brought the bull to bay. When I came up the scene was one worthy of Landseer. A large blue bull is at all times a fine, looking animal, and this one looked very formidable as, mad with rage and pain, with head lowered and tail erect, he made frantic charges at his adversary, and notwithstanding the crippled limb which was hanging useless at his side attempted to crush the dog with his remaining forefoot by rearing up and trying to drop on him. I was too

much out of breath after a long run under a noon-day Indian sun to fire with effect, so I had to watch the scene at a distance until I recovered breath. I then incautiously attempted to cheer on the dog; but the pariah who had never seen a white face before, or perhaps disgusted with my interference, declined to assist me further and allowed the bull to give me another run as severe as at first before I got to him again.

Since the above notes have been printed, Colonel Douglas Hamilton, who is the best authority I can quote regarding field sports in Southern India, has permitted me to mention a curious corroboration of my remark, at page 122, regarding the general resemblance of nil-gai to horses. He informed me that the name given to nil-gai by the natives of the Coimbatore district means, when translated "*wild horse*," and that these people described them as wild horses so vividly that they induced an officer employed in that part of the country, and who, as I did in Orissa, went after them without seeing them, to believe that horses in a state of nature were actually to be found in Coimbatore. This might unintentionally have led others astray, as in the case of the hog and mouse deer, pages 112 and 121 of these notes.

This is however an excellent support to my remark; for when one considers the little communication natives of India had or even now have with each other, that leaving prejudices aside, the very languages are unlike and how unapt, they all are at receiving fresh impressions of any kind; it is perhaps not too much to say that one might almost as well expect natives of the Shetlands and of the Gold Coast to have similar terms for the same animal as those of Orissa and of Southern India.

No. 64.—Tetraceros-quadricornis.

JERDON, NO. 227, PAGE 274; FOUR-HORNED ANTELOPE.

This animal is more rare in most parts of the Madras Presidency than the muntjac or barking deer, with which it, the female especially, is sometimes confounded; both by European sportsmen and native hunters, under the ordinary term "jungle sheep" used by them for all small red deer.

The only wild specimens of this antelope I have seen were in Central India and in the Northern Circars near Daracondah in the Golcondah Zemindary : also on several occasions in Orissa. They did not to me appear to be nearly so active as the muntjac, or perhaps they are more easily confused, for I remember at least two instances of their being captured alive by beaters who were employed to drive hog into the plain : HAWKEYE has however, vide page 118, mentioned that the muntjac is sometimes thus captured, so I may be mistaken in this idea.

Except in a museum, I have never seen a head with the anterior horn well developed : "a knob or corneous tip which often falls "off, leaving a black callous skin," vide page 274 of Jerdon, being, as far as I can remember, their usual condition. Those I have seen, struck me as being of a lighter color, chestnut instead of bay, than the muntjac. I do not remember having ever tasted the flesh of this antelope.

I perfectly agree with Jerdon, page 275, that the specific name, "*Chickara*," applied the four-horned antelope by Hardwick, is quite erroneous ; I have never heard that name applied to any animal, except the Indian Gazelle, "*Gazella Bennettii*," Jerdon, No. 229, page 280, either by European sportsmen or native hunters. The mistake originally must have sprung from a mis-reading of or a mis-print of the Hindoostanee term, "Chausingha or Chouka," *four-horned*, often used by native hunters for this little antelope.

No. 65.—Elliot's Antelope?

MOUNTAIN ANTELOPE OF MADRAS SPORTSMEN.

I have been rather puzzled about a small antelope which my friend HAWKEYE in the following account taken from the *South of India Observer* terms "*The Mountain Antelope*," but I fancy it is the species referred to as "Mr. Elliot's antelope" by Jerdon, who says at page 274 of his book that he was at one time strongly inclined to consider it distinct from the northern animal, or four horned antelope, as all those procured from the Eastern Ghauts had only a vestige of an anterior horn, and were very pale-colored ; but in difference to Mr. Blyth's matured opinion, Jerdon has united

them. It is, I think, much to be regretted however that Jerdon has not given a more full description of Elliot's antelope, HAWKEYE writes as follows to the *South of India Observer.* I find that I have not noted the date of the paper, but it must have been in August or September 1868 :—

"THE MOUNTAIN ANTELOPE"

"Is but little known, and, perhaps, has not even been heard of "by many, as one of the game animals, frequenting the mountain "ranges of Southern India. Two have been killed on these hills, "during the last ten or twelve years, by a well known sportsman "residing here.* The first was given over to the Museum at this "place, but being badly preserved, was destroyed by insects ; this "was a female, the second was a male. I will attempt, as well as I "can, to describe this animal, which, though it can scarcely be new to "science, has at any rate not been fully noticed in detail by Jerdon, "who may, for what I know be ignorant of its locality, for I can "find nothing in his volume of the Mammals of India, descriptive "of the animal in question. Jerdon in his work, classes the Moun-"tain Antelope with the capricorns, or as he calls them, antelope "goat ; but this I conceive cannot apply to the animal I am deal-"ing with. On the Pulney Hills, the mountain antelope is not "scarce, as it is here. On those mountains, which are so open and "undulating, like the Downs in England, with little or no wood "or sholahs, scattered here and there, as on the Neilgherries ; the "mountain antelope is on ground suitable to its habits, and can, "without difficulty, be met with ; though it is quite the contrary "in bringing him to bag. Swift of foot, keenly alive to danger, "not easily perceived when lying in the grassy hollows, and fleeing "away at the least alarm, it requires much patience and woodcraft, "on the part of the stalker, to ensure success. This animal has all "the appearance of a doe antelope of the plains, in color, size and "general features. The following points will, however, exhibit "distinctive peculiarities, and may afford opportunity for others "who may have met with this deer, to give more scientific inform-"ation regarding it than I can, perhaps "SMOOTH BORE," who "corresponds with the *Field* on sporting subjects, may be able "to do so.

* Ootacamund, Neilgherries.—VAGRANT.

"The animal in question, which Colonel Hamilton, in his report "on the Pulneys, designates the mountain antelope, is, as far as I "can judge, a true antelope. In color, sandy or very light rufous. "The hair, longer and coarser than the antelope of the plains, and "it is provided with the suborbital sinus, has hoof pits; the throat "white, and the same color extending along the belly. The fetlocks "are furnished with thick tufts of hair, with a bar of white across "the front, similar to that of the Neilghie, the ears are much broader "than the common antelope, and have tufts of longish hair in the "orifice. The horns are smooth, tapering, and exceedingly sharp "at the points, four inches in length, and slightly curved forward "—only found on the males—tail between six and seven inches "long. In size this animal is about the same as the Gazella "Bennettii, the black-tailed or goat-antelope,—the chikara of "sportsmen. Its flesh is very good. One specimen of this antelope "was, I am informed, shot in the open jungle, in the neighbourhood "of Hassanoor. It is some years now since the last was shot on "these hills, and I doubt much if they will again be met with. "The two that were killed; though at an interval of some years, "were found on the open hills, not far from Pykara.* None have "been seen since the last was shot. I cannot find in Jerdon's "book of Mammals any description tallying with the specimen, from "which I have taken the above notes."

Having however obtained from the friend and brother sportsman, quoted at pages 32, 33 and 57 of these notes, the head of one of these antelopes killed at Hassanoor in Southern Mysore, I applied to the best authorities I could think of, viz., Colonel Douglas Hamilton, who had, I knew, a specimen of the mountain antelope, killed at Pykara on the Neilgherries and who is probably the most accomplished sportsman in the Madras Presidency, and Captain Jesse Mitchell who is in charge of the Government Museum at Madras, for any information they could give me regarding the four-horned antelope, Elliot's antelope, or the mountain antelope. I forwarded at the same time to Colonel Douglas Hamilton the head, a photograph of which is attached, and which I intend to present to

* A doe has been seen on the very same ground since the above was written. VAGRANT.

the Madras Museum. His reply is as follows; the latter part refers to the horns of both his specimen and mine, sloping from the skull at different angles to each other :—

"I think from the description this must be Elliot's antelope, it is evidently the same animal as mine. The only doubt is, that in my specimen there is not a sign of "spurious horns," though it has the "osseous bumps," which are so conspicuous in yours, but certainly are not to be "easily detached," as stated in Elliot's description. In all other respects the measurements and descriptions correspond exactly; though it is strange Elliot did not note the peculiar white lower jaw which is so marked in my specimen: this and the entire absence of "spurious horns," may fix it as a different animal or rather variety of the same animal.

Here are my measurements taken when the animal was fresh killed, you will see how close they are to Elliot's.

Height at shoulder........................	25	Inches.
Do. at rump............................	27	„
Length of leg......................	1 foot 5	„
Chest to rump....................	2 feet 2	„
Neck „	$6\frac{3}{4}$	„
Tail..	$9\frac{3}{4}$	„
Horns..	$3\frac{3}{4}$	„

I see your horns are slightly at different angles but not so marked as mine, than which they are quarter of an inch longer.

Captain Mitchell kindly gave me the following extracts describing both the four-horned and Elliot's antelopes.

"I have yours of the 25th, I shall write first Hardwicke's des-"cription of "Antelope Chickara."

"This species of antelope seems hitherto to have escaped any "particular description of the naturalist; and this circumstance is "the more remarkable, as the animal is not scarce in India. It "inhabits the forests and hilly tracts along the western provinces "of Bengal, Behar, and Orissa, and is known by the name of "Chikara.

"It is an extremely wild and agile creature, and only to be tamed "when taken young. In size this species is something less than

" the Harnessed Antelope : (A Scripta) it is in height, from the foot " to the top of the shoulder, $20\frac{1}{2}$ inches, and in length, from the nose " to the root of the tail, 33 inches, or 2 feet 9 inches, and the tail " is $5\frac{1}{2}$ inches more.

" The superior or common horns are black, subulate, rounded, " without annulations, smooth, and erect, slightly inclined forward, " and a little diverging ; their length 3 inches ; space between them " at the base 1 inch $\frac{8}{10}$ths, and at their tips 2 inches $\frac{4}{10}$ths. The " greatest thickness at the base is two inches in circumference, and " gradually tapering to a point of $\frac{1}{10}$th of an inch diameter. In front " of the common horns (1 inch $\frac{4}{10}$ths) in the middle of the forehead, " and between the eyes, rises a very short pair of spurious horns, " erect, stumpy, smooth, cylindrical, $\frac{3}{4}$ths of an inch in length, $1\frac{1}{2}$ " inch in circumference at the base, and suddenly tapering to a point, " they are at the base $\frac{3}{4}$ths of an inch apart, and at their tips 1 " inch $\frac{2}{10}$ths.

" Head in length $7\frac{1}{2}$ inches, and its greatest circumference, across " the cheeks and behind the spurious horns, 13 inches. Ears mostly " erect, ovate, the greatest breadth about $2\frac{1}{4}$ inches, and length $4\frac{3}{4}$ " inches. Nose naked and black, the margin of the lips black. Eyes " large with strong bristly black eyelashes. Limbs delicately made, " the shanks of the forelegs being $2\frac{1}{2}$ inches in circumference, and " those of the hind 3 inches ; the proper and spurious hoofs are " black ; the greatest circumference of the body 29 inches.

" The *general color* of the animal is an uniform bright bay on all " the upper parts ; and below, *i. e.*, the chin, the under-line of the " neck, the abdomen, the inner sides of the thighs, and under the " tail are inclined to white, more or less mixed with sandy hairs.

" Teeth in the lower jaw eight in front, the two middle ones being " greatly larger than the six lateral teeth, and spread out ; their " inner margins rounded, and not touching, and their internal surfaces " hollowed like a spoon ; in the hinder part of the jaw, on each side, " are six strong grinders, with pointed surfaces, and a like number " in the upper jaw similarly constructed.

" This is the description of a male subject.

" The female differs only in having no horns and being of lighter " colors. This distinction of color is found to be a permanent

" character ; it at least remained so for the four years I kept a pair " in my possession, and within which period they bred ; two young " ones were produced at the same birth, one a male, the other a " female ; and the distinction of color as above was conspicuous at " that early stage and continued.

" The male in the rutting season becomes exceedingly wild and " mischievous, and, although partly domesticated, continues danger-" ously so, running at every animal within its reach, whether deer, " goat, or man. Even the feeder could only approach him on the " verge of the circle to which the rope he was tied with allowed " him to reach."

" Major General Hardwicke had originally described this species " under the name of A. quadricornis ; but M. Desmarest having " described a species under that name, from a skull in the museum " of the Royal College of Surgeons, which appears to differ from " General Harkwicke's species in having the anterior or short horns " triangular, it has been judged advisable to distinguish the species " now described by the name of A. Chickara.

" Dr. Leach has formed a new genus of the four-horned antelopes " under the name of Tetraceros.

" The above from Linnæan Transactions, vol. XIV.

" The following is Elliot's description from the Madras Journal, " vol. X, pages 225 and 226.

" 56.—ANTILOPE SUB. 4, CORNUTUS ?

" New species ? Antelope Chickara, Hardwicke, Brown Antelope, " Sykes.

No. 66.—Sykes.

" KONDIGURI—CANARESE, JUNGLI-BUKRA, DEKHANI.

" It is not improbable that the Chickara (a name by the way most " incorrectly applied to this species, being restricted by all natives " to the preceding one) the Quadricornis of Blainville, and the " Striaticornis of Leach, all refer to the same animal. But the " descriptions being only from isolated individuals, have not been " sufficiently discriminated. The detailed description of General

" Hardwicke in the Linnæan transactions, differs in many important " particulars from the characters of the Dekhan species. This is " much larger, and the color varies considerably both from the " Hindostan Chickara, in which it is of a " uniform bright bay" and " in the shades of individuals of different ages in the Dekhan. The " spurious horns are so small, as rarely to be met with in adult " individuals, and are situated on two osseous bumps or risings " (strongly marked in the cranium) from which they seem to be " easily detached. These osseous rings are immediately in front of " the true horns, between the orbits, rather in front of a line drawn " across the forehead through the centre of the eyes, and become " covered with black callous skin, after the loss of the corneous tips. " The true horns are situated behind the eyes, or between the eyes, " and the ears, inclining backwards with a scarcely perceptible " curve forwards, straight, parallel, round, smooth, thick, and strong " at the base which has a few wrinkles and tapering to a point, " their color black. Those of a very old male were $4\frac{3}{4}$ inches in " length, and had three strong wrinkles, and one imperfect at the " base ; Plate IV, Fig. 2.

" The dimensions of a young adult male were ; height at the " shoulder 2 feet $1\frac{1}{2}$ inch, croup 2 feet 3 inches, length from the " muzzle to the insertion of the tail 3 feet 6 inches, of tail 5 inches, " ear $4\frac{1}{4}$, horns 4 ; from the muzzle to the base of the horn 6, of " head 8, leg 1 foot 5 inches, weight 43 lbs.

" But I have found them even heavier. The doe is about the " same size, and has no horns, nor any bony projections above the " eyes. The mammæ are four in number. The color is brown of " various shades, not bright, but sometimes so light as to approach " a dull fawn, darker than the *Cervicapra*, but not so bright and " deep as in the gazelle. The shade is browner on the hind quarters, " and darkest in the middle of the back. It becomes lighter on the " sides till it passes gradually into white in the middle of the belly, " without the well-defined dark line of separation, observable in the " other two species. The forelegs, particularly above the knees, the " inside of the fetlocks, the nose and edge of the ears are very dark. " A narrow line between the forelegs which gradually widens " towards the hinder flanks, the inside of the arms and thighs, are

"white, as is the inside of the ear, in which the hairs are long, and "arranged in indistinct ridges. The lachrymatory sinus is long and "parallel with the line of the nose.

"In its habit it is monogamous, and is always found in pairs, "frequenting the jungles among the undulating hills of the Mulnad. "It is never found in the open country, or among the hills on the "eastern side of the district, neither does it ever penetrate into the "western forests. The droppings are always observed in heaps in "particular spots. It is said to be fond of licking the salt efflor-"escence of the soil, from which habit the incisors of old individuals "are found to be much worn, and sometimes wanting altogether.

No. 67.—Antelope-bezoartica.

JERDON, No. 228, PAGE 276; INDIAN ANTELOPE.

I think that in Southern India the horns of the males of this antelope seldom exceed 20 inches in length, and that the average is far below that; perhaps much under 18 inches. The largest of those I have killed were a little above 22, the two next 21 and 19, all these were however shot in the Dekhan. The largest I have ever seen, or heard authentic accounts of, were 25 and 24 inches, and were shot, the first near Hyderabad in the Dekhan, and the second at Nagpore by the late Lieutenant Ramsbottom, of the 4th King's Own Regiment, whose description of them with a drawing, appeared in a *Bengal Sporting Review*, about 1847, under a letter signed H. B. R., in which brother sportsmen were invited to record whether they had seen any longer specimens. H. B. R. asked me to tell him if I could find any authentic proof of his horns being surpassed in length, and although, while he lived, I sought with care for this, I never got it. I can vouch that his drawings and description as given in the *Review* were correct: any errors in date, place, or even dimensions, are mine; memory, even that of the unselfish, cheery comrade and thorough sportsman, whether with gun or in the saddle, I have just mentioned, cannot without notes be relied upon.

I can corroborate Mr. Elliot's statements as to antelope, showing ingenuity in avoiding danger and concealing their fawns, page 277

of Jerdon. Once being very well-mounted, on an undeniable Arab, that before and after won several very good races, I rode down a fairly sized fawn. When I was close to and fast gaining on my quarry, over ground open and hard ; I suppose I must have taken my eye off the chase for a moment, probably to look at the future line of country. I suddenly and unaccountably lost sight of the fawn which had disappeared as if by magic, for nowhere near was there sufficient cover to conceal a hare. Fairly puzzled, I pulled up on a small rising ground on which I had last seen the fawn a few lengths in my front, and looked in all directions until I was about to give up the chase in despair, when the horse snorting and pricking his ears, attracted my attention to the poor little animal, that with ears and head laid close to the ground, was, just under the Arab's nose, squatted in a hollow so very shallow, that he could not have concealed himself, had he not thus laid his ears flat. This tale is to me a difficult one to tell, and therefore clumsily related, but when pace and ground, pursued and pursuer are taken into consideration, the working of instinct which pointed out the slight vantage ground, a hollow hardly deep enough to conceal half his little body and probably the only shelter near him, and caused the fawn to avail himself of it, must have been instantaneous. Again, at one of the afternoon open air receptions at Government House in Madras : in the midst of visitors, croquet players, bandsmen, &c., I found a very young fawn squatting in the same way on the lawn, so still, that some ladies, to whom I showed it, would not believe it was alive, until I put it off its "form," when it went away at speed. The little creature must have been concealed by the mother when she went to feed, probably just before the reception commenced, and both she and it were biding their time until the guests dispersed.

Some of the best runs with a spear I have ever had, have been after wounded antelope ; and I do not know any termination to a successful shot more satisfactory than a gallop of this kind. I have, like Jerdon, page 278, when trying to spear a wounded buck known one, with a broken foreleg, "give a run of three miles "before he was overhauled, and that on tolerably good ground." I was once too, when riding a very well-bred Arab, famous for his *staying* powers, fairly, and indeed ignominiously, beaten by a doe,

which I thought was going to fall an easy prey, and which I had wounded the day before, when my bullet, after having struck her, killed another doe beyond.

The one I fired at, however escaped. The following morning, I came on her again; so lame and crippled did she then appear, as she got up out of a cotton field and slowly hobbled away, that I disdained to fire at her and called for my horse and spear. The wounded muscles must however have been set right as she warmed with exercise, for although I got away on excellent terms with her —she improved the pace as she went until she fairly ran "Puzzle," for so was the horse named, to a stand-still. The ground in this instance was bad, but still had it not been so, I do not think I could have speared her.

If the suspicions of antelope are not roused by any unusual care on the part of the stalker, they can generally, the bucks especially, be approached without much difficulty on most ground. A good plan is, to pretend to wish to pass them, as they are feeding in a certain direction, when they will, of their own accord, often cross the sportsman. If they once imagine that a man wants to conceal himself, or if they lose sight of him for a time, it is most difficult to get a shot. The does, as with all other females, are more suspicious and inquisitive withal than the males, and if a herd, without being much alarmed, are on the move, they may be stopped for a moment or two by the poacher's dodge of whistling to them. This, which is, I have often heard, a certain mode of stopping a hare when not much alarmed and making it "sit up," will often cause some of the does to halt and listen, when the buck will come up to make them move on. The trick is an unworthy one however, and it is unfair to mention it.

I have seen semi-wild bucks, in a paddock caught by nooses attached to the horns of a tame one as mentioned at page 278 of Jerdon, and I know that all over the Madras presidency, antelope are often caught in this way.

Since these notes were written, I have found the article in the *Indian Sporting Review*, which I have alluded to at page 134,

At page 17 of the number of that periodical for March 1847, my friend H. B. R. writes thus in a letter dated Kamptee, 1st January 1847 :—"I send a rough sketch of two pairs of antelope's "horns of uncommon length. One pair measured twenty-five and "a half inches, and weigh 11 lbs. 4 oz., and belonged to a black buck "which I killed at Hyderabad (Dekkan) in 1846. The other are "twenty-four and a half inches long, and weigh 11 lbs. 11 ozs., and "belonged to a dark brown buck which I killed at Daolee or Deroly, "about 60 miles south-west of this place. Perhaps you will "kindly let me know if any longer have been seen or heard of by "you or any of your friends ?

"I ask the question as I have never yet been able to meet with "a "Shikar Dost," who has had or known anything like them. I "have seen some thousands myself on our side of India, (Madras) "and these are certainly the only two pairs which I have met with "that come near to them in length. Twenty-two inches is con-"sidered a very fine pair, and twenty-three uncommonly long."

When it is remembered that this writer "H. B. R." had just been quartered for some time at Secunderabad, near to which is the Nizam's "*rumnah*," or preserve, teeming with antelope, it must be allowed that his opportunities of seeing them were better than those enjoyed by most men.

At the risk of the story being set down as an Indian traveller's tale, I must relate how with one ball from a 14-smooth bore, I broke *three* legs of an unhappy buck antelope.

On the same trip mentioned in the notes on the fox, at page 56, my palankeen, or rather the light litter I used as a substitute for that conveyance, was one morning, just before dawn, set down by the bearers, who said that they had been so much exhausted by the last stage, which had been a muddy one, that they really could not go farther, and that I must send to the nearest village for extra men : meaning thereby that I should promise them a reward if they would consent to go on at once. This I would not do, for the litter, kit and occupant included, were far less than the weight of most empty palankeens ; so telling them to rest for an hour, I took my gun and strolled towards a small lake which I knew was near. As is the custom with most sportsmen, I must have been moving

noiselessly, for, on the grey misty curtain which often hangs over a lake at night, being suddenly dissolved by the first sun light, I found myself almost in the centre of a herd of antelope. Several does, each more ghost-like than the other, sprung up from the smooth, short grass on which they had been resting close to the water's edge and, with their large ears erected, gazed silently at the intruder on their slumbers. Presently a fine black buck followed their example and stood, about sixty yards off, facing me. I fired at his chest, missing that, but breaking a foreleg just below it with the ball which then passed through the hinder leg on the same side and smashed it close to the hock, the bullet then glanced into and broke the other hind limb, which must have been lazily stretched back as the buck, roused from his sleep, stood staring at me.

The news of my success at once magically refreshed my bearers, who, delighted at the prospect of venison, without complaint or demur, or waiting for any suggestions from me, forthwith detailed two of their party to bring on the buck, while the diminished number taking up their load, jogged cheerfully on to their proper halting place.

On that occasion I was getting over, by night and day stages, and as fast as I could, a long journey of about seven hundred miles from Russelcondah in Goomsoor, to Rajahmundry on the banks of the Godavery river, and back again ; therefore in that part of the country where every husbandman, shepherd or fisherman is also a palankeen bearer, travelling in any conveyance of that kind was a legitimate and not unsportsman-like proceeding ; but to me there have been few greater pleasures than getting over long distances in the saddle ; and as I am on the subject, I trust I may be excused if I enter the following extract from a chapter on ponies, which I wrote a short time ago for the last edition of the Griffin's Aide-de-Camp, a well known book on the horses used in India :—

"The "Dekkanee tattoo," ! ! ! how many a liver trying ride under a roasting sun and in the teeth of wind which felt almost as scorching as a blast from a furnace : but still how many days of glorious sport, and how many a cheery comrade, do those words recall ? No man, save the writer's old friend, Henry Shakespear, in the "Wild sports of India," has attempted to do justice to the game little slave

to whose blood and gallant endurance as a hack, so many a day's sport, whether with gun or spear, has been due. We can vividly remember, after many a broiling gallop, how welcome to the sight of weather-beaten rider and panting hackney used to be the varmint little "relief" as he stood under the scant shade of some "baubul" thorn. How alike in all essential points were the two ponies, how wide-awake and vicious-looking was the fresh one, and how often the little brute used to fight, until like Don Juan's hack, he

"Knew that he had a rider on his back."

When he would give up further mutiny, settle down to a stretching gallop and appear to enjoy it too; how we oft times used to reproach ourselves as we looked at the last pony, and how varmint and game were his looks as with big blood-like, but gentle eyes, the only *soft* things about a Mahratta, wide thin nostrils and lean head all brought out by violent exertion; we pulled him up with quivering legs, heaving flanks and shaking tail, to bear witness to having been rattled along at twelve miles an hour over a bad road and under a midday Dekkan sun. Never, their tempers excepted, were there better ponies, and sin and shame will it be if the breed, used up as it was for baggage animals during the mutiny by Rose's, Whitlock's and other Central Indian columns, not to mention the enemy, be allowed to die out. It is said however that Sir Richard Temple will prevent this, and if he does, the thanks of many a light weight, with a lighter purse, should be freely bestowed on him.

Few, even among sportsmen, understand or appreciate the pleasure of a long ride of, say sixty, or even half as many more, miles at a stretch, with a change of horses at every stage. First, there are always the pleasures of change, then difficulties, and sometimes excitement or danger to encounter, and, where did man show greater knowledge of his fellows than did Scott when he wrote, as causes why they should stray.

* * * "I sought to drive away
"The lazy hours of peaceful day;
"Slight cause will then suffice to guide
"A Knight's free foot-steps far and wide
"A falcon flown, a greyhound strayed,
"The merry glance of mountain maid:
"Or if a path be dangerous known,
"The dangers' self is lure alone."

Next, to grapple with a feat of this kind, the rider must be in perfect health and good working condition ; in themselves, the chief elements of pleasure to man : then there is that feeling of secret self-glorification or satisfaction or conceit (call it what the reader pleases, we shall not, I trust, quarrel about a word,) which every one worth his or her salt must now and then give way to, in knowing that the feat you are doing with such ease to yourself, that you will bear it out jauntily at mess or ball that evening, is not to be tried by half of your acquaintance. Again, in a long and fast ride, the rapid change of scenery, or of the wayfarers, the constant attention to the horse, the chance of taking the wrong path and with it perhaps the certainty of loss of dinner and bed, distract a man's thoughts from himself, and happier than most and more blessed must he be, whose thoughts do not require being thus distracted : Alas ! we all find in one way or another, sooner or later, we acknowledge that there is truth in

"Post equitem sedet atra cura."

If anything however could unseat the gloomy spirit from her evil perch, it would be an eighty-mile gallop across the Dekkan."

However while we were quartered in the Northern Circars where good ponies are very scarce, and where palankeen bearers are in hundreds, we all, for long distances, took to a sort of covered litter, designed by a dear old brother officer, whose talents of stowing away kit, were so excellent that a regimental wit, in dubbing this invention the "*triumph*," remarked that my ingenious friend, "would never be satisfied until he could pack a camel load "on a bullock."

As "*triumphs*," therefore were these litters known from that day and probably in the Ganjam district they still retain their original name. They were especially convenient for sportsmen in the Northern Circars, for they were very comfortable beds in quarters, and when turned over and fastened to a bamboo pole with a light canvass cover or pent roof fixed on the legs, they were in a few minutes converted into admirably light and weatherproof palankeens for camp use.

No. 68.—Gazella-Bennettii.

JERDON, NO. 229, PAGE 280 ; INDIAN GAZELLE.

I have found these animals not far from the foot of the Ramandroog hills in Bellary, and they are probably to be met with in other parts of the Ceded districts ; I doubt however whether they are abundant anywhere south of the Kistna river. I do not think that they are to be found far into the Northern Circars, although they are very common in the Hyderabad country on their border. Although I have never seen the males fight, as described at page 281 of Jerdon, I can easily imagine that they do so, for the tilting matches of the bucks of the common antelope are carried out much in the same manner. This beautiful little gazelle often attracts attention or makes its presence known by the peculiar hiss and stamp, of the foot mentioned by Mr. Elliot at the same page. From their color and the rocky, barren ground they frequent generally, they are more difficult to see than the common antelope ; and were it not for this noise, they would often escape observation. In the heat of the day they are often to be turned like hares, out of long grass, or from under small bushes ; and as they then get up very close a charge of shot, or an Ely's cartridge stops them easily. I fancy that they are occasionally killed by jackals ; for, one afternoon near Saugor, while coursing with two friends we watched, for a long time, four jackals evidently trying to force one of a small herd of young bucks to separate from the rest. The gazelles stood in a circle and maintained their ground well, by keeping their heads very gallantly outwards to their foes, until at length seeing us, both sides made off. We laid the greyhounds into and killed one of the jackals.

It was an interesting sight, for the jackals displayed a good deal of cunning, two kept themselves in reserve and together, while the others pretended to gambol round the outer edge of the circle evidently trying to coax one of the young bucks into charging out of it. The gazelles stamped and snorted and seemed much inclined to fight, and probably had we not been seen, one of them, would have done so ; of course only to fall a victim to his rashness. In a

trial of speed the jackalls would not have had a chance. I think that about 10 inches is the usual length of the horns of the males. The longest I have seen were a little under 13 inches. I do not think that I have ever seen the horns of the females more than 5 inches in length ; they are generally much less than this, and I have on several occasions remarked that they were somewhat deformed—one larger than the other, or stunted, or cracked.

With reference to the following remark at page 276 of Jerdon who says that, the horns of the common antelope vary much in the size of the rings, in the spiral twist, and in divergence, and that "Three instances of females with horns are now on record. They "were however thin and much curved, gyring round like those of "*Ovis ammon.* One buck is also mentioned in which one of the "horns curved round, and Blyth suggested that the testis of that "side had probably been injured." I should in the proper place have mentioned that, at the palace of the Rajah of Chicarry in Bundlekund, vide my notes on the hunting leopard at page 39, three, or four, castrated buck antelopes were pointed out to me, all with horns, much resembling those described by Jerdon. I was told that there was a female with horns much like those at the palace, but I did not see her.

The name of "Goat Antelope" given to this gazelle by our Madras sportsmen, gives I think, a better idea of its shape than "ravine deer." The animal from its general appearance and peculiar tail is by no means unlike a half-grown goat. Why naturalists should have termed, No. 227 of Jerdon, page 274, the four-horned antelope "*Chickara,*" I cannot imagine : for I have never heard that name applied to any animal but this gazelle ; unless the word be a misreading, or a misprint for the Hindoostani term "*chow singha*" *or* "*chouka,*" four-horned, which some Indian sportsmen may have intended to represent the proper animal, *i. e.*, the four-horned antelope. Jerdon, No. 227, page 274, or No. 65, page 130 of these notes, but which in writing and perhaps in the confusion of names between "Jungle Sheep," for the four-horned antelope and "Goat Antelope," for the gazelle may have led even so excellent an authority as Hardwicke, astray in his nomenclature in this instance.

Great confusion is often caused by Indian sportsmen, and others using native terms, after most liberal notions of orthography and pronunciation, while writing or speaking of animals that have well defined names in natural history.

We have no more right to call an Indian animal by his local name, which may vary, it must be remembered with almost every district, instead of employing that by which he may be designated in any work on natural history, than we should have, while writing to a foreigner, an account of a run with fox-hounds, to use the Scotch instead of the English word for the animal they were in pursuit of.

No. 69.—Nemorhœdus.

JERDON, NO. 230, PAGE 283 ; SEROW OR FOREST GOAT.

When I was quartered at Shuaygheen, on the Sitang river in Burmah, a female of, I think, this species was brought alive to Major Berdmore, the Assistant Commissioner, by some Burmans who had caught it in the river ; by which it had probably washed down by some flood from the Karenee mountains. As far as I can remember it was much more black than "red-brown," and therefore it could hardly have been "N. Rubida, page 284." It was even in its exhausted and dying state exceedingly savage, butting at every one who approached it, so that I can readily believe that, as stated by Jerdon, it can keep the wild dog at bay. The horns were about ten inches in length not much curved backwards. It is, I have been told, a forest animal, but its high hoofs, strong limbs and goat-like appearance, gave me the idea of an animal that inhabited rocky mountain tops as does our Neilgherry wild goat or ibex.

No. 70.—Hemitragus Hylocrius.

JERDON, NO. 233, PAGE 288 ; THE IBEX OF SPORTSMEN IN THE MADRAS PRESIDENCY.

Neilgherry Wild-goat of Jerdon.

This fine goat is so little known even to Indian sportsmen and naturalists, except to those few who have been so fortunate as to be stationed within reach of its fastnesses among the awful [I do

not know any better word by which to express my feelings regarding them] cliffs on the edges of the mountains of Southern India; that in despair of being able to give a good idea of it, I shall first extract Jerdon's description in full and then some notes which have been most kindly given to me by my friend Colonel Douglas Hamilton, a mighty hunter, who has had, and what is more to the purpose has not neglected, most excellent opportunities of furnishing a correct account of the animal.

At page 288 of his book, Jerdon gives the following description of the ibex of our Southern Indian sportsmen, or, as he calls it, the Neilgherry wild-goat. It will be seen that this is pretty nearly corroborated by Colonel Hamilton. Jerdon writes, that the "Adult "male is dark sepia-brown with a pale reddish-brown saddle, more "or less marked, and paler brown on the sides and beneath; legs "somewhat grizzled with white, dark-brown in front and paler "posteriorly. The head is dark, grizzled with yellowish-brown, and "the eye is surrounded by a pale fawn-colored spot. Horns short, "much curved, nearly in contact at the base, gradually diverging; "strongly keeled internally, round externally, with numerous close "rings, not so prominent as in the last species.* There is a large "callous spot on the knees surrounded by a fringe of hair, and the "male has a short stiff mane on the neck and withers. The hair "is short, thick and coarse."

Regarding this, Colonel Hamilton says:—"I think Jerdon's des-"cription is good, but I should call the saddles of the old males "grizzled with white and not pale reddish brown. A real old "" saddle back" has a white saddle and almost jet black points. "He makes a mistake about the length of the tail, "6 *or* 7 *inches*," "it is not more than three inches."

Jerdon certainly does not do full justice to the size of the Neilgherry ibex when, at page 288, he gives the dimensions as follows:—

"Length of adult to root of tail, 4 feet 2 to 4 feet 8; tail, 6 or 7; "height at shoulder about 32 to 34 inches; horns occasionally 15

* The tabir, or jharal of Himalayan sportsmen, "Hemitragus jemlaicus" Jerdon, No. 232, page 286.—VAGRANT.

"inches, rarely more than 12. Colonel W. Campbell gives the "length as 6 feet 5 inches (inclusive of tail); height 3 feet 6 inches "at the shoulder. These measurements appear to me to be "unusually large, and I suspect are erroneous."

With reference to these measurements, Colonel Douglas Hamilton gives me, extracted from his journal, the following dimensions of two male ibex :—

March 30th, 1856—Height at shoulder, 41 inches; circumference immediately behind the elbows 53.

January 3rd, 1857—Height at shoulder, 42 inches; circumference of fore-arm, 12 inches; this was an old "saddle back," the first mentioned was a brown buck, *i. e.*, not a regular "saddle back."

He also gives me two measurements taken in profile, to assist him in making correct drawings; and I record them, for they prove that Doctor Jerdon, although generally wonderfully correct in even the most minute details, has in this case under estimated the size of the Neilgherry ibex. It will be seen that the second buck, although taken as above stated, nearly equalled the length, 4 feet 2 to 4 feet 8, given by Jerdon as that of an adult male, measured, it is to be supposed, along the back instead of merely at the sides. The first buck mentioned by Colonel Hamilton, measured from "chest to rump 45 inches," and the second from "nose to tail 50½ inches," both of these measurements be it remembered were taken in profile.

Colonel Hamilton tells me that he has measured several other males which were 40 inches in height at the shoulder, and that although he had not any record to refer to, he felt nearly certain a large female measured 35 inches, or one inch more than the greatest height given by Jerdon to the male.

Again, as regards the size of the horns of the Neilgherry wild-goat, Jerdon does not appear to have seen any very fine specimens; for he says, that the horns are "occasionally 15 inches, rarely "more than 12."

My friend HAWKEYE, vide page 156, says that the horns of the buck run from 12 to 16, and that it is a point of honor with sports-

men to try to obtain a "17-incher." Colonel Douglas Hamilton considers 9 inches in circumference and 15 to 15½ or ¾ in length, to be the average of a large horn. Both he and I know of one 16 inches in length, shot by a well-known Southern Indian sportsman, of the Madras Civil Service; and in February 1869, (last month), at Ootacamund, he and I measured the horn of a magnificent buck ibex, shot within 15 or 20 miles of that place. The exact measurements of this mighty horn were 17 inches in length and 9¾ in circumference at the base. This settles the question of the "17 inches," mentioned by HAWKEYE. This head is well worthy of a place in a museum, although unfortunately it is not perfect; for, as is often the case with ibex, one horn was broken by the buck, on receiving the bullet, falling or jumping over the cliff on the edge of which he was resting. The other horn, the one we measured, is however perfect; it will, I fear, never be equalled, still less surpassed for the cruel neglect of all game preservation on the very limited hunting grounds of the Neilgherries, is causing the ibex rapidly to disappear. Not only, "is it difficult now" (vide page 289 of Jerdon,) "to get a near shot at them," but, as I can vouch, from personal experience within the last few months, a man no matter how cautious and scientific be his plan of operations, how velvet footed his tread, or how keen his eyesight, may traverse those glorious mountain ridges for days together without seeing an ibex.

Jerdon says that, he has "seen above twenty individuals in a "flock occasionally, but more generally not more than six or seven," page 289 of his book. They are however sometimes to be met with in large flocks, therefore as I knew that Colonel Douglas Hamilton had counted some of these, I applied to him for information on the subject. Here is his reply:—"The largest flocks of ibex "I have ever met with were on the high ranges of the Annamullays. "I once counted 120 pass out of one valley, but I think that there "were probably two or three herds collected there. I never had a "fair opportunity of counting a herd on those ranges, but I am "pretty certain that many of the large herds were from 60 to 80 in "number. On the Kondahs, I once was able to count a herd, and

"I did so several times making the number 60 and 65, and, on "the other side of the same mountain on the same day, I counted a "herd of 35 ; there was not a single adult buck amongst them." He also replied as follows, to some remarks of mine about ibex sometimes entering the belts of forest or large coverts below the hills. "Jerdon says that they will now and then take shelter in woods, and he is right. A wounded buck will take shelter in a wood and remain hid there. I have known them to do this on several occasions. Once I found and bagged a large buck that I had wounded and seen enter a good-sized sholah,* the evening before. He was driven out by dogs and stood at bay in the wood for some time before he would break cover. On another occasion, among the high ranges of the Annamullays, I came upon four or five bucks, fired and slightly wounded one ; they were lying on some rocks above a large forest, perhaps 200 yards from the edge, with a steep grassy slope leading down to it. At the shot, they all, much to my astonishment, went full gallop down into the wood, exactly as samber do. I sat down and watched, feeling sure that they would not remain there ; after waiting a considerable time, I saw them all steal out for another part of the wood. I think that they will travel through forest in going from one of their rocky feeding grounds to another, but I don't think they ever live in forests. I have found them in low scrub on the rocky sides of large woods."

I must wind up my notes on the Neilgherry ibex ; for I cannot avoid calling it by the name always applied to it by the sportsmen of Southern India, although I know that the term is not a scientifically correct one, by extracting from the *South of India Observer* of the 3rd and 17th September 1868, the following excellent description from the pen of my friend Hawkeye. I can vouch that his illustrations of the habits and social customs of all the animals he writes about are carefully and most correctly taken from nature and from personal observation. I feel sure that any one who has been among the glorious mountain scenery of which he writes, so fondly and so well, would agree with me in this point. But let him speak for himself :—

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* Vide page 32 of these notes.—VAGRANT.

GAME—THE IBEX.

"SIR,— I was "raised" as the Yankees term it, in one of the "inland, or perhaps more properly styled, the middle counties of "England,—it matters not which. But I remember when almost "a child, being taken to the stables at the farm, to see what was in "those days considered a great curiosity in that part of the country, "namely, a goat—and a formidable animal it looked to my young "mind. I remember too being told that it came from the Welsh "mountains, where numbers of its fellows were to be found in a "wild state. What a land of romance was the far distant Wales "to the imagination of my youth! and what wonders did I not "conceive of the mountains where even goats ran wild! Alas! how "completely dissipated when I visited that part of the country in "after-life. To one whose ideas of hills had been restricted to a "view of the distant Surrey hills, the thought of the mountains in "Wales was as of something stupendous, wonderful and appalling; "coupled as they were in my juvenile mind with all the adven-"tures I had heard or read of, regarding travellers lost in snow, St. "Bernard and its dogs, and all the interesting romances connect-"ed with such like wonderful tales. These ideas held fast pos-"session of me for many and many a year, till at last the vision was "dispelled by a visit to the land itself, after close on twenty years' "residence in India—and how disappointing! Snowdon, the far-"famed mountain, what was it? an ordinary hill, looking so small, "swallowed up as it were by the surrounding elevations. To my "mind, Cader Iddris is far finer; a bold, craggy mountain, the very "spot where the wild goat would love to dwell. It became a matter "for regret that I had not seen the mountain districts of my native "land ere visiting the far east.

"My next acquaintance with the wild-goat was obtained through "that dearly loved old volume (a household Penates) of Robinson "Crusoe, from the print of his triumphal return to his hut, bearing "the old mother goat he had slain on his shoulders, and the little kid "following at his heels. Dear old Crusoe! Where is the boy of my "time, who has not as I have done, longed to be a Robinson "Crusoe? I fear for the present generation if they love not

" Crusoe. My next and actual introduction to a real live moun-
" tain goat, happened on these hills, away at the Neddiwuttum
" crags, not far from the public bungalow, at the head of the
" Goodaloor Pass, and that brings me to the subject of my present
" theme, the Ibex.

" It happened some years ago, about the time when the first
" small clearing had been made in the present Ouchterlony valley ;
" then to the eye of the sportsman, one of the most magnificent
" forest-clad glens on these hills, beautiful in all the varied aspects
" of light and shade, rock and wood, that the mind can imagine ; to
" give place, alas ! to the hideous coffee shrub, with huts and houses,
" and all the signs of civilized life and cultivation, adherent thereto.
" Why the planters have set their faces and hands so decidedly
" against the picturesque, I am at a loss to understand. On ridding
" the land of one lovely object, the forest, why they could not
" have combined the beautiful with the useful is incomprehensible !
" A few clumps of trees, a belt of wood here and there, would
" have turned an ugly coffee plantation into a park-like, pleasant-
" looking domain, combining wood, water, and cultivation, forming
" a picture pleasing to every eye ; instead of a mutilated landscape,
" with scarcely one redeeming feature, and painful to look upon.
" Ah, well ! it is remarkable, but so it is, and so it must be. We
" have to forego the " dulce," and accept the " utile ;" drink our
" coffee and bless the Ouchterlonys, and all other men devoted to
" the same line of hard work, and never-ceasing toil, and be thank-
" ful ! !

" Let us turn our atttention to the ibex, and see what we have
" to say about this fine specimen of the true wild goat ; an animal
" in great request as an object of the chase, bearing a good trophy
" and requiring all the energies and skill of the most ardent sports-
" man to bring to bag. Let us try to show how this is done ;
" but first we must give some description of the animal and its
" habits, before we take our readers to the field of exploit, and tell
" them how to stalk him.

" The " Neilgherry wild goat," as styled by Jerdon, though I
" think " mountain goat" may be a more appropriate term, is a
" species of the genus capra, distinctive to Southern India ; the

"only other kind of goat approaching in likeness to it, being the "tahir of the Himalayas. But the latter is altogether a different "species, though bearing in appearance, and the shape of the "horns, some of the characteristics of the former. Our mountain "goat is a sturdy, I may almost say, a massively formed animal, "with short legs, remarkably strong fetlocks, a heavy carcase, "short and well-ribbed up, combining strength with an agility "wonderful to behold. Of late years they have become scarce, "and to meet with a herd exceeding twenty now-a-days is very "improbable. They, alike with the samber, have been persecuted "so incessantly, that they also will be of the past in a very few "years, if no means be taken to insure them some quietude, by "adopting "fence" or "rest" months as already advocated. Not a "great many years ago, ibex could generally be found all along "the precipitous rocks, forming the line of ghauts skirting the hills "from Rungasawmy's Peak to Makoorty, Sispara and Mailkondah. "Now they are with difficulty found at some more favored spot "than others, from which when disturbed they depart and, perhaps, "are not again seen for months. Their habits are gregarious, and "does are seldom met with separate from the flock or herd, "though the males often are. The latter are considerably larger "than the females, and as they grow old, assume a peculiarly dis-"tinctive appearance, by the hair on the back becoming lighter—"almost white in some instances; while that on the flanks darkens, "causing what is called the saddle to appear, and from that time "they become known to shikarries as the "SADDLE BACK" of the "herd,—an object of ambition in the eyes of the true sportsman.

"It is a pleasant sight to watch a herd of ibex when undisturbed, "the kids frisking here and there on pinnacles or ledges of rocks "and beetling cliffs, where there seems scarcely safe foothold for "anything much larger than a grasshopper or a fly; the old mother "looking calmly on, or grazing steadily while the day is young, "cropping the soft moss or tender herbs and sweet short grass "springing from the crevices of the craggy precipices in rich abund-"ance. Then again, to see the caution observed in taking up their "resting or abiding places for the day, where they may be warmed "by the sun, listening to the roar of many waters, and figuratively,

"we may say, chewing the cud of contentment, and giving them-"selves up to the full enjoyment of their nomadic life and its romantic haunts. Usually, before reposing, one of the herd, generally "an old doe, may be observed intently gazing below, apparently "scanning every spot in the range of her vision, sometimes for half "an hour or more before she is satisfied that "all is well;" strange "to say, seldom or ever looking up to the rocks above. Then "being satisfied on the one side, she observes the same process on "the other, eventually calmly lying down, contented with the pre-"cautions she has taken, that all is safe. Her post as sentinel is "generally a prominent one, on the edge and corner perhaps of some "ledge, to be well-sheltered from the wind, and warmed by the sun; "along which the rest of the herd dispose themselves as inclined, "fully trusting in the watchful guardian, whose manœuvres I have "been describing. Should the sentinel be joined by another, or "her kid come and lie down by her, they invariably place them-"selves back to back or in such a manner that they can keep a look "out on either side. A solitary male goes through all this by him-"self, and wonderfully careful he is, but when with the herd he "reposes in security, leaving it to the females to take precautions "for their mutual safety. I have stated that these animals seldom "look above them, except when any cause of alarm leads them to "do so. I recollect an instance which I will relate, partly to show "the advantage of a good color for a stalker's dress, and to illustrate "what I have mentioned above. I had disturbed a buck ibex "accidentally one morning, and after watching him a long distance "with the glass, observed him take up a position and commence "the vigilant process previously mentioned. By this I knew he "was prepared to lie down. He was a long time about it, but even-"tually he was satisfied, and took up his post on a prominent rock, "from which, as lying with his back to the mountain he held a clear "view in front and on both sides. I approached from above—the "wind all right, and the ibex reposing comfortably in fancied secu-"rity. I had to pass a large rock to clear an intervening impedi-"ment, and gain a full view of the buck, as I could at first only see "his horns. I had taken the precaution to remove my shoes, the "grass being very dry and noisy. The crunching of the dry grass

"as I moved, attracted the notice of the ibex, and suddenly he looked "back and up towards me. He was not more than eighty or ninety "yards below. I leaned against the rock, my shikar dress blending with the dark-grey of the stone and burnt up grass so completely as to deceive even my lynx-eyed prey. Long, long he "looked, till my very knees trembled with anxiety. At last the "turned his head, but I knew better than to move, being sure he "would have another look. He did so, and it proved to be his last, "for when he again turned his head away, I quietly subsided and "in another moment the buck died on his rocky bed. On many "other occasions the advantage of a suitable dress has been fully "proved. A neutral tint is preferable, as blending better with "surrounding objects; the color of withered heather is perhaps "the best.

"On the higher ranges of the Annamullays, ibex are, I am informed, very numerous; herds of hundreds sometimes being seen. "Colonel Hamilton, in his report on those mountains, describes "how the native tribes on those regions drive the animals through "the numerous passes they frequent, and by erecting barriers with "open passages here and there, catch a great many in nooses "made of the ground rattan, placed in the openings. It is difficult to "believe what Jerdon states regarding the ibex found near Cochin; "their familiarity and tameness as he describes, (vide page 290, "Jerdon's Mammals of India) at the temple being so utterly opposed "to their habits as observed by sportsmen; nevertheless it is or was "a fact, for I remember well, hearing Colonel Frederick Cotton corroborate what Jerdon now says about the animals frequenting "the church referred to, for he (Colonel Cotton) found one on his "visit to that locality actually reposing within the porch of the "building. Here, so impatient are they of the presence of their "enemy—man—that the very faintest taint in the air will send them "headlong down the steep slopes of the mountain, seeking refuge and "safety in precipitate flight. Although so wary in their habits, "these animals are at times not so difficult to stalk as the samber; "with the wind favorable, they can usually be easily approached "from above as already described. Their conduct also when suddenly alarmed by the crack of a rifle is curious. Instead of a speedy

" and direct flight as when they see or smell their enemy, they start " about from rock to rock in a most bewildered manner ; at times " squatting like hares, then springing up with a shrill whistle, hesita- " ting for a moment which line to take, and all the time affording " opportunities to the sportsmen to pick and choose his shots. I " have heard of some five or more falling, in one morning, to the " deadly breech-loader of the present day. Eheu ! Eheu ! ! that " it should be so ! ! !

" Beside their enemy, man, they have another very wily poacher " to guard against,—the leopard. Wherever ibex are found, there " assuredly will the marks of this their stealthy foe be detected. " From the strong scent attending the ibex, especially the males, " the leopard has no difficulty in finding his prey, and, I imagine, " many fall victims to his rapacious maw. Some years ago, an " officer from Bombay out at the Khoondahs, witnessed the capture " of an ibex by a black panther ; he had the good fortune to slay " the marauder, and bagged both ibex and cheeta.

" To my mind the pursuit of the ibex is more exciting, if possible, " than that of the stag. The peril that attends the adventurer on " the crags and fearful precipices where the quarry resort, the " grand and sublime scenery, the giddy heights, and sombre depths, " the danger and difficulty of the stalk, all combine in adding to the " charms and attractions of the pursuit, and make a man feel proud " of his success, when he has killed and brought to bag a fine old " saddle-back. I will not attempt beyond a brief sketch how the " animal is to be stalked. Let us suppose ourselves at sunrise on " the summit of a rocky ridge, leading down to what may be called " a steppe on the mountain side. The ridge falls rapidly ; in some " places so steep, that to descend it in an upright posture is next " to impossible ; it is a scramble down one mass of rock over " another, now across some scanty scrub of grass, underfoot loose " stone, again another wall of rock, and so on till the first steppe " is accomplished ; perhaps a mile or nearly so from whence you " start, a short space of an easier slope, covered with long grass in- " terspersed with boulders of rocks here and there, and then another " descent, perchance worse than the first, the incline being even " steeper and the impediments more difficult. Below this second

„ steppe, the sholahs or belts of jungle from the lower vallies creep " up the narrow water-courses, terminating, according to the nature " of the ground, either in a point abruptly or spreading out broadly " under a mass of rock, forming the head or termination of the " gully. These are the spots the ibex favor. We will suppose " we have seen a saddle-back from the upper ridge, at his early feed. " Our first point is to make out whether he be alone or in company. " We can discern no others, so we quietly watch the movements " of the buck. He tries our patience painfully, for we cannot " descend the face of the mountain in front of him with any hopes " of success. We must wait till he takes up his resting place for " the day. Our vigil continues for more than an hour, when at " last selecting an isolated black rock, our friend disposes himself " comfortably, ruminating and basking in the great solitude he loves " so well. Now then ; we proceed with the stalk. We carefully " descend the spur of the mountain, to reach a knoll covered with " long grass and about one hundred and fifty yards from where the " buck lies. We succeed in doing so, and then arises the question " shall we approach round by the right or by the left of the mound ? " The track to the left looks most used. We select it, and cau- " tiously drag ourselves along through the yielding grass ; it so " happens that to our left-hand there is a small water-course with " a narrow strip of jungle leading to a broad sheet of rock, over " which the stream trickles down to the continuation of the sholah " below ; several boulders of various sizes are scattered here and " there on this slab or sheet of rock. Just as we clear the point of " the sholah, horror of horrors ! ! we spy the form of a doe ibex " lying stretched on the rock, and her kid some ten paces nearer to " us, basking at full length in the warm rays of the sun. At the " same instant, the mother catches sight of the movement in the " grass. She is about sixty paces from us. We crouch and watch. " After a few moments the doe gets up, but not as if much alarmed, " only somewhat suspicious. She stretches herself, looks hard at " us, and at last walks towards the kid. The mode of communica- " tion is on this occasion very clearly demonstrated, for she gives " her child a smartish butt, *a posteriori*, causing it to spring nim- " bly on its feet. They both pause for a second or so, broadside

"on. The thought of "kid and mint-sauce" flashes across our mind "for a moment, but then the saddle-back may still be asleep on his "stony couch. No alarm has yet been communicated, as far as we "can see, except to the kid. Mother and infant move slowly "away and pass behind one of the boulders of rocks referred to "above. In another second we see three or four more heads "appear. Alas! a warning has been given. We have nothing "left for it but to scramble on through the grass till we come in "sight of the buck's resting place. It is away ahead and to the "right. He may still be there! we sight it at last, but the blank "rock meets our gaze; the buck also is gone! Presently we see "below us the herd led by the saddleback, careering far away to "distant slopes below, and our chance is gone! Oh! the weary "pull up the face of that steep mountain side! how disappoint-"ment with its leaden weight added to our toil, and made the "dragging dreary length of that trying climb longer and longer "still! How strong the contrast when on a subsequent excursion "we stalked another saddleback, almost at the same place, and "succeeded in winning his trophy! then how joyously we scaled "the mountain path, how light our heart and heels! How we "recounted to ourselves (preparatory to telling the tale to those "awaiting us in camp) the intricacies and difficulties of the stalk; "how we had watched for hours, and how a change of intention on "the part of our quarry, (by what induced who knows?) led him "into danger; and how with "firm hand and eagle eye" we slew "him on the spot! Such is the "stalking the ibex." Have I so "told the tale, as to inspire others with an appreciation of what "grand exciting sport it is? If so, my wish is won and my task "is done.

HAWKEYE.

"NOTE.—I have not been able to obtain precise information as "to the height and size of the Ibex. I have seldom had an oppor-"tunity of taking the measurements myself. I am told that the "buck averages from $9\frac{1}{2}$ to $10\frac{1}{2}$ hands, or from 39 to 42 inches, "Jerdon says from 32 to 34, but he has evidently under-estimated, "for large does have reached 35, and the saddle-back always appears "at least half a foot taller. The horns of the buck run from 12 to

"16. It is a point of honor with sportsmen now-a-days I hear to "try and obtain as a trophy a 17-*incher*.* The flesh of the saddle-"back is rank and unpalatable, but that of the females, young bucks "and kids, is excellent; in fact, I know of no meat for the table "to equal it. Of the breeding season there is as usual some doubts, "kids being seen with the herd during most months of the year. "Jerdon says they now and then take shelter in woods. This is "contrary to the observations of most sportsmen and my onw. The "only time I have known them to take refuge in the woods is when "wounded; they never do so at any other time that I am aware of. "Jerdon in his measurements gives the tail as six inches long. "This also I consider incorrect. The tail is remarkably short, and "that on a skin now by me is barely three inches, including the "hair at the tip, which is somewhat long. I have now told you all "I know about this fine specimen of a game animal—the "Ibex of "the Neilgherries."

"P. S.—I notice a letter from "Incipient Tyro," in your last "issue. If true, it is sad indeed that such things should be; but "there is little use in writing on the subject, for I still hear on "every side of soft-horned stags being killed. To slay a stag in "*soft velvet*, is almost as bad as killing a hind; and not going "down to satisfy yourself that she is dead! Truly if these things "are fitting for sportsmen, then indeed may I say of them as "Falstaff did of his soldiers: "I am ashamed of you."

HAWKEYE.

9th September 1868.

Every line in this account is drawn from life and personal observation. Not only does the panther, or, as HAWKEYE terms him, the leopard, commit sad havoc among ibex, but his royal relative the tiger, sometimes does so also. A few months ago, *i. e.*, in November 1868, I was stalking over one of the best known ridges on the Koondahs; there were fresh signs of ibex apparent, both to eye and nostril, but not a head could be seen. HAWKEYE's remark on the strong scent attending the ibex is, like all that he writes regarding field sports and game, perfectly correct; for this must often guide the prowling panther to his prey; the odour that

* This "17-incher" has at last been obtained, vide page 146.—VAGRANT.

hangs about a rock on which an old "*saddle-back*" has been sunning himself at the edge of a cliff, while he is looking down on the low-lands, hundreds of feet, in sheer fall below him, is at times far too strong to be pleasant; and the rocks on which a herd have been playing or resting, smell like a stable in which goats have been kept. These last signs and others we came across, but not an ibex could be seen. We had that morning close to the place come on the foot-prints of a large tiger that had evidently kept to the same path we followed, and had crossed some of the lovely running streams of the Koondahs at the same spots that we did. My gun-carrier had just whispered to me, in despair, that the ibex must have seen this tiger and bolted into the low country when some marks of blood and hair on the grass, a few feet in front of us, attracted his attention; just beside them we found, very little damaged, the body of a fine doe ibex, probably the sentinel of the herd, which, while resting on the very edge of a cliff and looking out below, had been crept upon by her noiseless foe from above and caught, as a cat would capture a sparrow. That a tiger, and a large one too, was in this case the aggressor, there could not be a doubt; but although there was very little doubt that he would return ere sunset to finish his repast, he had only eaten a part of one hind quarter. I could not afford time to wait for him as I had to return the following morning to Ootacamund en route to the plains, so contented myself with the head. I do not think that he ever did return however, for on my next visit to the Koondahs, in the following February, only a few weeks ago, I found the bones nearly perfect, which would not have been the case had he finished his meal. Being on the very edge of a precipice, on which they could not have expected to find much to eat, the dainty dish had escaped the notice of even such keen-scented foragers as the wild dog, or the jackal.

No. 71.—Bos-Gaurus.

JERDON, NO. 238, PAGE 301; THE GAUR, BISON OF SPORTSMEN IN MADRAS.

Jerdon's remark regarding this fine animal that it was also formerly an inhabitant of Ceylon, but has been extinct there for

above 50 years ; will, I fear, before another century passes away, be applicable to Southern India ; for it is rapidly disappearing before the progress of civilization and agriculture. This perhaps should not be regretted, but one may be permitted to hope that, before the bison disappears from our forests it may be domesticated. This however seems most improbable for, as Jerdon says, all attempts hitherto made to rear the young gaur have failed, the animal never living over the third year. The reason of this probably is, that it is almost impossible to provide the captive with a fit substitute for the cool, damp and shady cover afforded by the deep forest, dense clumps of bamboo and long grass in which it loves to dwell when free.

Although, like Jerdon, page 304, I have known instances where bison have been killed at above 6,000 feet of elevation ; I fancy that, could they find cover deep and secluded enough to suit them, they would be as comfortable on the plains as on hilly ground.

Mighty as is this magnificent animal and headlong as is his rush when he crashes through forest after being alarmed—he can, like all other wild creatures, creep very silently through cover when he pleases. I was one of a party of, I think, seven brother officers who were posted at the edge of a wood, into which beaters had been turned. The instant the drive commenced, a solitary bull bison made his way silently past three of us, of whom, to my shame be it said, I was the first, before he was discovered. Then and on being wounded, he broke through the forest with a most startling crash, bearing down in his agony all obstacles as if they were grass ; amongst others, sweeping low, in his blind and furious rush, a couple of stout saplings, each thicker than a man's arm and high in proportion, of the strong, close-grained and heavy "*saul*" tree, "*shorea robusta,*" is, I believe, the scientific name ; literally, as we could see from the marks of his blood on the stems, by running them down. We afterwards found that he must have remained for some time watching me from a thick clump of bamboos within a few yards, 20 at most, of the spot where I was standing. I then remembered that, just as the beat commenced, I had heard some animal in these bamboos, but as I thought from the snort it gave, it was only some wild pig, I did not even look towards them, as I was eagerly watching the hill-side for more important game.

Out of that hill and, I think, the same afternoon, in one beat we turned a herd of bison, a tiger, and two or three bears.

No men have more opportunities than have sportsmen, of observing the wonderful goodness of the Creator in placing "every living creature that moveth after his kind" upon ground where the animal cannot be readily seen and where natural aids are always present for the concealment necessary either to protect the weak antelope, or squirrel from foes, or to enable the tiger to procure his prey.

Every Indian sportsman must have observed how completely the yellowish fawn-color of the antelope, or the gazelle assimilates with that of the dusty, sun-burnt plains on which they are generally found, and how difficult it is to see a doe when, she is gazing and offering, what a friend of mine terms, the "*knife-shot*," that is, standing end on facing the spectator and giving him almost as puzzling a target at a one hundred yards, as if he were about to try the Yankee feat of attempting, at twenty, to split a bullet on the edge of a knife.

Or ; he can probably remember how easily the large hill squirrels, page 59, animals as large as a cat, can conceal themselves on branches almost perfectly bare of leaves.

Or ; how black volcanic rocks, or deep shadows match the dusky coat of a bear ; or, how closely the light and shade caused by the sun falling through bushes and on dead leaves, lichen tinted rocks, or stumps correspond with the colors of the tiger or leopard ; or, how difficult it is to see even a mighty stag grazing on a grey mountain side ; or, to take a much more humble and familiar instance, even when one knows that a flock of green pigeons (treronidæ) are in a certain tree, and the birds may be heard, or their *shadows* seen, as they flit among the branches, how nearly impossible it is to mark one of their bodies.

Those who only think of elephants as they have seen the domesticated giants working at any of the innumerable tasks on which these almost reasoning slaves may be employed, can hardly imagine how puzzling a matter it is to see them distinctly among the dark shadows and irregular outlines that fill up any portion of a landscape in their forest haunts. I can only say, that with a experienced and

well-taught attendant, who had been originally trained by Colonel Henry Shakespear, the well-known author of the "Wild sports of India," I was once, for some moments, which almost seemed to be hours, waiting in long grass and reeds within a few feet (*not yards*) of the head of a very fine elephant without being able to get a satisfactory shot at him ; or even to see more than an indistinct dusky outline of form, or a dark shadow, as his trunk was raised aloft when the mighty beast, a magnificent tusker, suspected that he scented mischief. Having at length made sure that there was something uncanny near him, he uttered a shrill scream and wheeled right round on the very spot on which he stood, and, without exposing any more vulnerable target than his enormous hind quarters, at which it would have been wicked and wanton cruelty to shoot, rushed down hill, followed by his family, eight or ten unwieldy wives and sturdy children, whose progress as they crashed through the dense wood and undergrowth of long grass, caused a noise sufficient to startle any one whose nerves were not tightly braced, and which my pen certainly is too weak to describe. Having once found the herd it was easy enough, as the wind was favorable, to get up to the animals ; for we were guided by the noise they made while feeding, but it was simply impossible to see him until they fled. A large female who was standing, apparently asleep and close to the large "*tusker*," might however have been very easily shot had he not offered a more tempting bait.

Since the above notes were written, I have seen in the *South of India Observer* of the 22nd October 1868, the following extract from one of my friend HAWKEYE's letters, which appears so apro pos to their subject that I do not hesitate to appropriate it.

In mentioning the manner in which an elephant, when he wishes to intimidate, blows with his trunk, HAWKEYE writes as follows :—

"On another occasion I was blown at by a wild elephant, who "threw her trunk out from behind the jungle lining the narrow path "along which we were running to intercept the herd, and blew her "nose so suddenly in the chest and face of the leading man that he "fell right back on me. We had cut this elephant off from its "companions and having a young calf to take care of, she had "loitered behind the herd, In this case we noticed what I have

"previously alluded to—the wonderful and extraordinarily quiet "manner in which these gigantic animals noiselessly move through "the forest when trying to avoid observation or danger. This "animal, we in particular noticed, crept through the jungle and "almost gained her point, namely, to escape from us in the direction "the herd had taken; and though we had been watching for her "slightest movement for many minutes, we neither saw nor heard "the least sign of her, till she made a rush at us to drive us out "of the way; but she did not make good her charge, coming only "as far as the bank of the path within a few feet of us, when a "shot turned her and she bolted, and then we found that a young "one was with her. Yet both these animals had been moving "parallel to us within a few paces distance without our distinguish-"ing a foot-fall or even the brushing through the bushes, which "the movement of such large bodies would naturally create; all "was still as death."

No. 72.—Gavaeus or Bos Sondaicus.

JERDON, NO. 238, PAGE 307; THE BANTENG OR BURMAH WILD-COW.

Although I have been for many years in Burmah, I have only seen two specimens of Bos Sondaicus. The first, I saw for a few moments; when I was shooting near the Yomah range of mountains, west of the station of Tonghoo, I could only get a hasty glimpse, not sufficient to warrant a shot, as the animal dashed into cover, but it appeared to me to be far lighter in form and more active and elegant than bos-gaurus.

I saw the other at Rangoon; it was a very beautiful calf, I think about 6 or 8 months old, the property of Sir Arthur Phayre, who sent it to England, but I believe that it died on the voyage. If I mistake not, a former specimen which he sent home reached England in safety and was figured in the *Illustrated News*.* I have lost the notes taken at the time that Sir Arthur Phayre kindly sent the calf for my inspection, but remember that I was struck with the peculiarly deer-like expression, eyes, ears, and

* This is probably the one said, by Jerdon, page 307, to be living in the London Zoological Gardens.—VAGRANT.

somewhat nilgai-like markings of the young animal, which was very gentle and full of frolic, but appeared most impatient of heat, as indeed all forest animals are.

When I was in Rangoon, W. Theobold, Esq., Geological Survey, gave me a very fine skull of Bos Sondaicus, which I have since made over to the Madras Museum and, as it has there been placed near a head of the gaur, the distinctive absence, in the former of the large frontal crest which in the latter is, vide Jerdon, page 302, " semi-cylindric and rising above the base of the horns," is very clearly shown.

This peculiar formation of the skull is, I think, mentioned by Mr. Blyth in his catalogue of the mammals in the Calcutta Museum ; it is exceedingly well-indicated in the photograph from which the accompanying illustration has been copied and which was taken for me by Messrs. Nicholas and Curths, the well-known photographers of Madras and Ootacamund.

Jerdon remarks, vide page 307, that the Banteng wants the dew-lap, and resembles the *gaur* more than the *gayal*, that the young and the cow are red, and that it is the " *tsoing*" of the Burmese, the *gaur* being the "*pyoung*."

No. 73.—Manis.

JERDON, NO. 241, PAGE 314 ; PANGOLIN OR SCALY ANT-EATER.

I have already, at page 24 of these notes, mentioned that, I saw a large piece of the scaly hide of the Indian variety of this animal taken out of the stomach of a man-eating tiger, to whom this indigestible delicacy was probably not more trying than truffles would be to his slayer.

I can corroborate almost every word of Mr. Elliot's description of the manis at page 315 of Jerdon.

Either this species of the pangolin, or more probably the next, I had not at the time any good description of the animal to refer to, appeared to be very abundant at Rangoon, and specimens were often caught near the barracks by soldiers who were said to be converts to the ideas, mentioned at page 315, as to the mineral diet and the

aphrodisiac virtues of the flesh of the animal. I know that the natives of Orissa believe in them.

While I was in Rangoon I had a manis in captivity for several weeks: it had been caught close to my house in a common wire cage rat-trap, into which it certainly must have had considerable difficulty in forcing its long body and tail, but which it probably entered to eat the ants or other insects which might have been attracted by the bait.

It appeared to sleep all day, rolled up with the head between the forelegs, and the long broad tail folded over the ball it thus made so firmly as to require a considerable effort on the part of any one who wished to uncoil it, a liberty which it never resented further than by uttering a faint hiss: when touched while moving about at night, at which time, like Mr. Elliot's specimen, it was very restless, it always assumed the position I have just described, which is doubtless one of defence and one which I do not think that any of the smaller beasts of prey, jackals, or chaus cats for example, would be able to force.

Although I had it most carefully watched for this purpose, neither any of my servants, nor I, ever saw this creature eat anything; it would however drink freely at almost any hour, in the manner described by Mr. Elliot, lapping the water that was offered to it by rapidly darting out its long extensile tongue. I have no doubt however, it fed at night on white-ants, quantities of which, with their earth and cells, I caused each evening to be placed near it, or on small red ants which I tempted near its water-dish with sugar, very probably also on the cockroaches which came to the same bait.

It was a most troublesome animal to keep; for crippled, awkward and slow as the manis is, in walking with its back arched and, as Jerdon says, the forefeet with their anterior surface bent over and brought into contact with the ground, it can burrow with great rapidity by digging the ground out with the powerful foretoes and by shutting up the burrow thus made behind it with the hind feet.

I never could persuade my servants who were in great dread of it, notwithstanding that they allowed it was toothless, that the animal was not venomous.

Since writing the above notes I have found the following remarks in the "Naturalists' voyage round the World," by Darwin, who although he refers to varieties of the South American cousins of this family the armadilloes "*Dasypus minutus*," or "*pichy*," and the "*apar*," may perhaps be quoted in corroboration of what I have just said regarding the means of self-defence and the burrowing powers of the Indian pangolins. Of the "apar," commonly called "*mataco*," Darwin says :—"It has the power of rolling itself into a "perfect sphere, like one kind of English wood-louse. In this "state it is safe from the attack of dogs ; for the dog not being able "to take the whole in its mouth, tries to bite one side, and the ball "slips away. The smooth hard covering of the *mataco* offers a "better defence than the sharp spines of the hedge-hog." Of the Dasypus minutus or *pichy*, Darwin writes :—"In the course of a "day's ride, near Bahia Blanca, several were generally met with. "The instant one was perceived, it was necessary in order to catch "it, almost to tumble off one's horse ; for in soft soil the animal bur-"rowed so quickly that its hinder quarters would almost disappear "before one could alight."

Another instance, if indeed any example be required, of how wonderfully the Creator has adopted the means of defence of each of his creatures to its habits and conformation. Even the toothless and awkward-looking manis, although incapable of damaging any living thing larger than a small insect, is proof against the attacks of any animal at all likely to molest it.

I own that I have never been struck with the resemblance of the manis to a fish, mentioned at page 317 of Jerdon, who says that in China and the South of India the animal is called the "hill" or "jungle-carp," but a brother sportsman, who had never heard of this, pointed it out to me in almost the same words.

PART II.

When commencing these notes I determined not to attempt any descriptions of the animals I wrote about: for, as stated at page 52, I fancied that all men who care for Indian Natural History would certainly have Jerdon's book, on which my notes have been grafted, or that they would know enough about any animal here mentioned to make this unnecessary; but as a friend, in whose opinion I have great confidence, thinks that I should describe those now brought to notice; I shall extract Jerdon's descriptions of such as may not be generally known; or regarding which there may be a doubt.

The *Entellus* monkeys or *Langoors*, of which three, if not five, varieties must be more or less known to our Madras sportsmen, who may however not have been able to distinguish the species of each individual they have met with.

Page 1, No. 1, *Presbytis Entellus.*

Langoor or Hunumán, Monkey.

Jerdon mentions five species of this genus, which may be known to Madras sportsmen. Of the first, "*Presbytis Entellus, The Bengal Langoor,*" he writes at page 4, as follows:—

Description.—"The general hue of this species is a pale dirty or ashy stramineous, darker (in some) on the shoulders, rump, and sides of the limbs, and paler on the head and lower parts; entire hands and feet conspicuously black; no trace of a crest of hairs on the vertex.

Length of a male, 30 inches to root of tail, which was 43 inches; but it attains a still larger size.

This is the common *Langoor* or *Hunumán* of Bengal and Central India. Buchanan Hamilton says, that it is not found north of the Ganges, and that even south of that river it is rare in certain parts that would appear suitable for it, as at Rajmahal. Mr. Blyth states that, he has never seen it wild east of the Hooghly, but that it extends up the right bank of that river and the Ganges, and thence to Cuttack and Central India. It is uncertain how far it

extends southwards and westwards, and one variety or race from the south was named as distinct by Elliot. My impression of the *Langoor* found in the Deccan is, that it had less black on the hands and feet, and was of a decidedly more ashy hue than the Bengal monkey, thus corresponding with part of Horsfield's description of *Entellus* ; and it is still a desideratum to define the geographic boundaries of *Presbytis Entellus* and *P. priamus.*"

Page 2, No. 2, *Presbytis Anchises.*

Langoor or *Hunumán Monkey, doubtful race.*

Jerdon, at page 6, says that, "Messrs. Elliot and Blyth, at one time separated from *P. entellus,* a race or variety, under the name of *P. anchises,* Elliot. It nearly corresponds in color with *P. entellus,* but has the hands and feet much less black than that species, and the hair of greater length, that of the toes particularly being remarkably long ; and the hairs moreover are straight, not wavy, as in *Entellus.*"

I have not yet succeeded in getting a skin of this monkey ; but I still believe that, if it exists, it is to be found in the Koodlighee Talook, S. W. of Bellary in the Ceded Districts. Goodicottah, is, I think, one of the most likely places whereat to procure it ; so should be the rocky ground between Koodlighee and Hoorly-Hull. It is to be hoped that some sportsman from Bellary will obtain a specimen and forward it to the Government Museum at Madras.

At page 7, No. 3, Jerdon writes as follows of :—

"*Presbytis priamus.*

The Madras Langoor.

Description.—"Ashy gray color with a pale reddish or "chocolate au lait" tint overlaying the whole back and head ; sides of the head, chin, throat and beneath, pale yellowish ; hands and feet, whitish ; face, palms and fingers, and soles of the feet and toes, black ; a high-compressed vertical crest of hairs on the top of the head ; hairs long and straight, not wavy ; tail of the color of the darker portion of the back, ending in a whitish tuft.

Much of the same size as *Entellus.*

This species inhabits the eastern Ghauts and southern portion of the tableland of Southern India, not extending however to the

Malabar Coast. It also occurs in the northern part of Ceylon. We have no authentic information recorded of its extension to the Deccan and Southern Mahratta country, and we cannot be certain whether the species recorded by Mr. W. Elliot and Colonel Sykes, are *Entellus* or *Priamus* or *Anchises ?*"

And, at page 8, No. 4, of *Presbytis Johnii.*
" *The Malabar Langoor.*

Description.—" Above, dusky brown-slightly paling on the sides; crown, occiput, sides of head and beard, fulvous, darkest on the crown; limbs and tail, dark-brown, almost black; beneath, yellowish white. Not quite so large as *Entellus.*

This monkey is found on the Malabar Coast, from about N. L. 14 or 15 to Cape Cormorin, that is to say, in the provinces of South Canara, Malabar, Cochin and Travancore. Horsfield, in his catalogue, states it to have been found near Madras, and also in the interior of the peninsula. This is certainly erroneous, and I do not believe that it extends beyond the limit of the forests of Malabar. It does not ascend the mountains to any great height above the sea, and I never saw it above 1,200 or 1,300 feet on the various passes that I have traversed. It certainly does not occur on the wooded tableland of the Wynaad. It is not confined to the forests, but frequents gardens and the belt of cultivated wooded land that extends all along the sea coast of Malabar.

I am convinced that Geoffroy described our monkey, which indeed he procured at Mahi, only five miles from Tellicherry, where, as I know, it abounds. It varies a good deal in the intensity of its color, and especially in the blackness of its limbs and tail, and the young are throughout of a sooty brown."

And, at page 8, No. 5, he writes of

" *Presbytis jubatus.*
The Neilgherry Langoor.

Description.—" Of a dark glossy black throughout, except the head and nape, which are reddish-brown, the hair very long; in old individuals, a greyish patch on the rump. Length of one, head and body, 26 inches; tail, 30; but larger individuals are seen, though it does not attain the size of *Entellus.*

This handsome monkey is found on the Neilgherry Hills, the Anamallays, Pulneys, the Wynaad, and all the higher parts of the range of ghauts as low as Travancore. It does not, as far as I have observed, descend lower than from 2,500 to 3,000 feet. It is shy and wary, and does not affect the neighbourhood of man. It is, or used to be, very abundant in the dense woods of the Neilgherries, the fur is fine and glossy, and is much prized."

At page 5 of these notes, I begged sportsmen to abstain from shooting monkeys. I certainly never do so, not having forgotten the human-like actions of a large "*inuus rhesus*" or Bengal monkey which I was persuaded to shoot; but if an exception may be made, it should be in honor of the beautiful fur of the black Neilgherry langoors. Their flesh is moreover excellent food for dogs; at times a grand desideratum to a sportsman wandering over these hills and unable to procure meat of any kind, unless when for his servants, or his dogs, he is obliged, contrary to all his better and more sportsmen-like instincts, to slay a hind, or a stag in soft horn, therefore unfit to shoot.

At page 4 of these notes, I have mentioned an instance of a large snake having killed a black monkey, probably of this species or perhaps the "*Malabar Langoor.*" Within the last few days I have come upon the following extract of a most interesting letter upon snakes sent to the *South of India Observer* of the 27th May 1869, by my friend Hawkeye, who says:—"A correspondent in the *Field* of the 27th March 1869, treats with ridicule the idea of a snake with a "head as large as a tiger's," but seen when in the act of swallowing its prey, we can well imagine the appearance assuming such dimensions. I have fallen in with the rock-snake, both large and comparatively small, several times in my wanderings in the land of the sun. I saw the skin of a good sized one,—twelve feet, I think, that was killed at Courtallum in Tinnevelly, under the following circumstances. A friend of mine was staying at that charming retreat—the most delightful one in all Southern India to my mind for the period the season lasts, *i. e.*, from June to September,—when one day the gardener came running in hot haste to announce that a *big* snake had caught a monkey; out rushed my friend, armed with a spear, and there in the garden at the foot of

a large mango tree he beheld the snake, with the monkey nearly three parts down his gullet, the tail and hind legs only being visible. Striking the snake with the spear as near as possible to what might be his spine, the effect was extraordinary—by a violent reaction of the degluting muscles, if I may so call them, the body of the monkey was ejected with considerable force, and the python then turned his attention to his assailants, and was killed with some difficulty. The curious part of the story is, that the gardener declared most solemnly, that he saw the snake take up its position at the stem of the tree, on which the monkeys were stealing the fruit ; that it raised itself up the stem about half its length, and as he described it, looked at the monkeys ; that they raised a wonderful hubbub, chattering and screaming as if frightened out of their lives, skipping about from branch to branch, and, all the time, one of the monkeys—the gardener deliberately asserted—descended the tree, until within reach of its dread foe, and then and there gave herself (brave female) up to the rescue of her bewildered family. Now, was this fascination ? it looks like it certainly. The gardener persisted in his tale, and I tell it as it was told me ; and what is more, I am disposed to have faith in it."

Page 5, No. 4.

Sir William Jones in the interesting account of the lemur kept in captivity by him, referred to by Jerdon at page 15, mentions that "it was called by Hindoos the bashful ape, and that the Mussulman's retaining "the sense of the epithet give it the absurd appellation of a cat." The Burmese name monkey's concubine, is however, I think, far more descriptive than either of these.

Jerdon gives the following description of the "slow-paced lemur and of the slender lemur, tardigradus and gracilis :—

Jerdon, No. 10, page 14, *Nycticebus tardigradus.*

" *The Slow-paced Lemur.*

Description.—" Dark ashy-gray with a darker band down the middle of the back ; beneath, lighter gray ; forehead in some dark, with a narrow white stripe between the eyes, disappearing above them ; ears and round the eye, dark ; tail, very short ; length of one, 14½ inches ; tail ⅝ths of an inch ; another was 16 inches long.

The slow-paced lemur is only found, within our limits, in the most eastern portion of Bengal, Rungpore, Dacca, &c. It keeps to the forests, and is quite nocturnal in its habits, sleeping in the day-time in holes of trees, and coming forth at night to feed on leaves and shoots of trees, fruit ; and also, it is said, insects and small birds."

Jerdon, No. 11, page 15, *Loris gracilis.*

" *The Slender Lemur.*

Description.—" Above of a greyish rufescent color ; beneath, the same but paler ; a white triangular spot on the forehead extending down the nose ; fur, short, dense and soft ; ears, thin, rounded.

Length of one, about 8 inches ; arm, 5 ; leg, 5½.

I believe that this curious little animal is found in most of the forests of Southern India, but, it is difficult to find owing to its small size and nocturnal habits, and it generally escapes the observation of travellers. It does not appear to be common, or at all events well-known in the Malabar Coast, yet I have heard of it near there. It is, however, very abundant in the forests of the eastern Ghauts, and large numbers are brought alive at times to the Madras market ; their eyes being a highly esteemed remedy for certain diseases of the eyes among the Tamul doctors."

Page 6, No. 5.

Jerdon's description of this detestable animal is as follows :—

Jerdon, No. 12, page 18.

" *Pteropus Edwardsi.*

The Large Fox Bat.

Description.—"Head and nape rufous-black ; neck and shoulders, golden-yellow ; back, dark-brown ; chin, dark ; rest of body beneath, fulvous or rusty brown ; interfemoral membrane, brownish-black.

Length, 12 to 14½ inches ; extent of wings, 46 to 52 inches.

This large bat, the flying fox of Europeans, is found throughout all India, Ceylon and Burmah. Specimens vary considerably in shade and coloration."

Since my notes at page 6 were written, I have carefully watch-

ed bats when they commenced their nightly flights and have been convinced that they drink when they touch the water as described by Jerdon at page 18. This habit is however not confined to flying foxes, but is common to all the other species of bats I know of.

During the present hot season, (1869) at about dusk each evening I have been in the habit of swimming in a bath close to my house in the Artillery lines at Kamptee, and while so employed have constantly seen bats of many kinds strike the water close to me as I floated about the bath or sat on one of the steps with only my head visible.

When they were coming towards, or crossing me, it was impossible from the fading light and rapid flight of the animals to see why they struck the water, which they sometimes did with sufficient force to cause both splash and sound. When they were flying from me however I have distinctly seen them lower their head towards the water and almost as distinctly have seen them drink.

At any rate that they do drink at these times, I feel sure.

Page 7, No. 6.

Megaderma Lyra, large-eared Vampire Bat.

In the case here mentioned of a tame canary being killed by a bat, I have since ascertained that the mate of the bird met with the same fate.

Page 8, No. 8.

Kerivoula picta, Painted Bat.

Jerdon's description of this butterfly-like bat is as follows :—

"No. 53, *Kerivoula picta, the Painted Bat.*

Description.—"Fur fine, woolly ; above yellowish-red or golden rufous ; beneath less brilliant and more yellow ; wing membranes, inky-black with rich orange stripes along the fingers, extending in indentations into the membrane.

Length, $3\frac{3}{10}$ inches, of which the tail is $1\frac{4}{10}$; expanse 10 : forearm $1\frac{3}{10}$; tibia $\frac{6}{10}$ths ; ears $\frac{6}{10}$ths. One measured, head and body $1\frac{9}{10}$ inches ; tail $1\frac{1}{2}$; forearm $1\frac{4}{12}$; tibia $\frac{7}{12}$ths ; expanse $10\frac{1}{2}$.

Page 8, No. 9, *Sorex caerulescens.*

" *The common Musk Shrew.*

Jerdon's description of this animal is as follows :—

" *Description.*—Of an uniform bluish-ash or pale gray color, very slightly tinged with ferruginous, and most so on the under parts ; naked parts flesh-colored.

Length, head and body, 6 to 7½ inches ; tail, 3½ to nearly 4. The skull of an adult male, according to Blyth, 1⅝ ; caudal vertebræ, 24 in number.

This appears to be the common musk-rat of almost all India, frequenting houses at night, and hunting round rooms for cockroaches or any other insects, occasionally uttering a sharp shrill cry. It will, however, not refuse meat, for it is sometimes taken in rat-traps baited with meat."

I know that these shrews will also eat bread : insects however, form their chief diet, so they thus do us more good than harm. I once disturbed one that evidently had been eating part of a large scorpion, whether the reptile had been killed by the musk-rat I do not pretend to say.

Page 11, No. 10, *Erinaceus micropus.*

" *The South Indian Hedge-Hog.*

Jerdon thus describes this animal.

Description.—" Ears moderately large; form somewhat elongated; tail very short, concealed ; muzzle rather sharp ; feet and limbs very small ; head and ears nude, sooty color ; belly very thinly clad with yellowish hairs ; spines ringed dark-brown and whitish, or whitish with a broad brown subterminal ring, tipped white.

Length of one, about 6 inches.

This hedge-hog is stated to be found at Madras and on the Neilgherries. Many years ago I procured one alive at Trichinopoly, which I gave to Mr. Walter Elliot, and I have reason to believe that this specimen is the supposed *E. collaris* from Madras, now in the British Museum. I never got another specimen from the Carnatic, yet it must be a denizen of the low jungles of the extreme

South of India. It has also been obtained on the Neilgherries and on the western range of Ghats."

Although Jerdon was as unsuccessful as I have been in procuring specimens of the South Indian hedge hog: from what I have heard I am inclined to suppose that this animal is not rare in the southern parts of the Madras Presidency: but, as its habits are nocturnal, and it can so easily conceal itself during the day, it is seldom seen. We know that our English hedge hogs do not move about in search of food until the sun is down. I am supported in this opinion by hearing from "*Smooth-bore*," whose notes on natural history are well known, that this hedge hog abounds between the Avenashy and Perunduray Stations, on the Madras and Beypore Railways, that is between Salem and Coimbatore. "Smooth-bore" tells me that he "had several brought to him, which became very tame, but which after some time all died or ran away. During the day they always coiled themselves under some piece of furniture, so that they could not be pulled out. They stand much higher on their legs than the English one and have a white collar; when feeding they put their feet into the saucer like the common pig." "*Smoothbore*" here quoted the rustic's criticism on a picture of pigs feeding without one having its foot in the trough. He does not mention what he fed his specimens on, but he could hardly have gone wrong if they were like their English relation who is, vide Buckland's Curiosities of Natural History, "one of the scavengers of our fields."

Page 11, No. 11, *Tupaia Peguana.*

" *Sekim Tree Shrew.*

Jerdon thus describes the tupaia, which although not an Indian animal, must be well-known to all who have lived in Burmah, where it is, I think, generally looked upon as an ugly squirrel.

"*Description.*—General hue a dusky greenish-brown, the hairs being ringed brown and yellow; lower parts the same but lighter, and with a pale buff line; a stripe from the throat to the vent, broadest between the forearms and then narrowing; ears, livid red with a few short hairs; palms and soles dark-livid red; nails fleshy.

Length of one, head and body not quite 7 inches ; tail $6\frac{1}{2}$; the hair one inch more ; head to occipital ridge $2\frac{1}{8}$; ear $\frac{5}{8}$ths ; foot $1\frac{3}{4}$; hand about 1. Another measured, head and body $7\frac{1}{2}$ inches; tail $7\frac{1}{2}$.

My specimens differ somewhat from those from Arracan, in having the lower parts much darker, and with the pale central line narrower ; in the Burmese examples, the whole chin, throat, and breast being buff."

Page 12, No. 12, *Ursus Malayanus.*
Burmah Bear.

I find that the skull of poor *Ada* was far shorter than that of an Indian bear, ursus labiatus, of about the same weight. The sketch attached is from an excellent photograph of these skulls taken by Messrs. Nicholas and Curths, Madras.

The Malayan bear certainly appears more sociable and more easily tamed than its Indian cousin : since my notes at page 12 were written, I have heard several most amusing stories of one which in its tastes must have been almost as epicurean as Sir Stampford Raffle's pet Malayan Bruin which preferred champagne to all other drinks. The bear I speak of, delighted in cherry brandy, and on one occasion, having been indulged with an entire bottle of this insinuating beverage, got so completely intoxicated that it stole a bottle of blacking and drank off the contents under the impression that they were some more of its favorite liquor. The owner of the bear told me that he saw it suffering from this strange mixture and evidently with, as may easily be imagined, a terrible headache : Hawkeye mentions this story in one of his letters to the *South of India Observer.*

Page 14, No. 13, *Ursus Labiatus.*
" *Indian Black Bear.*

Too well-known to need description. One of the best pictures I have ever seen of this animal is in Shaw's Zoology, where it is described as the ursine *sloth.* As this interesting work may not be generally known, I may be excused if I mention it more fully. Much of the information it conveys is now somewhat stale, but

many of the descriptions, of birds especially, are most minute and correct. It was published between 1800 and 1819, and the 11 volumes which I possess contain no less than 1,050 plates. Many of these, especially those of Indian animals, birds, &c., are exceedingly well executed as are most of the British birds. Some of the others which have evidently been taken from drawings or ill-stuffed specimens, are not so successful. I do not know whether a 12th volume was published ; the natatores are, I think, *almost* the only birds not described.

The 11 volumes I have are divided thus :—

"*Mammalia* 2, *Amphibia* 1, *Pisces* 2, *Insecta* 1, *Aves* 5.

When the first part of these notes was printed I did not know that bears were born blind. "Smooth-bore" has just sent me the following very interesting account of one he caught. "We had good "sport with bears up the Cauvery, shooting seven in the week. "We took two sets of cubs. One I brought up by a pariah bitch, "unfortunately it died last week. On the 17th day after taking it, "it first opened its eyes. I believe it was only a day old when I "got it, which would give 18 days as the time they continue "blind. It is just possible that the time may extend to 21 days, "but I think 18 more likely."

Page 17, No. 14, *Arctonyx collaris.*

Hog Badger.

Jerdon thus describes, at page 77, this curious and rare animal.

Description.—"Upper parts with the head, throat and breast, yellowish-white, more or less grizzled ; nape of neck, a narrow band across the breast, anterior portion of abdomen and the extremities, deep blackish brown, there is likewise a brown band from the middle of the upper lip, gradually widening posteriorly and including the eyes and ears ; and another smaller and narrower band arising from the lower lip, passing through the cheek and uniting with the former on the neck.

Length from snout to root of tail, 25 inches ; tail, 7; 1 foot high at the rump.

This very curious hog badger has been found within our provinces in the Nepal and Sikim Terais, and also I believe in parts of eastern

Bengal. Its chief localities, however, would appear to be still further east in Assam, Sylhet, Arracan, &c., Hodgson considered the one he found in the Terai to differ, but this opinion has not been upheld."

Page 18, No. 15, *Mellivora Indica.*

"*Indian Badger.*

Jerdon thus describes at page 79 the Indian badger, ratel, or honey-bear as it is sometimes termed.

Description.—" Above, tawny white or light-grey, black on the sides and beneath ; tail short.

Length of one, head and body 26 inches ; tail, 6. Another measured 32 inches ; tail, 5.

The Indian badger has long been considered as the Cape ratel, or honey-eater, but was recognized as distinct by Schinz : and Blyth, who, in his catalogue, joined the two, has written me from England, where he has seen both alive, that he now considers them sufficiently distinct. The Indian animal wants the marked white stripe that exist in the Cape species, between the grey of the upper parts and the black lower surface ; and its tail is decidedly shorter.

The Indian badger is found throughout the whole of India, from the exteme south to the foot of the Himalayas, chiefly in hilly districts, where it has greater facilities for constructing the holes and dens in which it lives.

The Cape ratel, Mellivora ratel, is said chiefly to live on honey, of which it is stated to be immoderately fond. The European badger, Meles taxus, is one of the best known animals of this group."

Page 18, No. 16, *Lutra Nair.*

"*Indian Otter.*

The following extract from a letter, signed W. C. R., which was published in the *Field* about the end of 1868 (last year,) and described flyfishing on the Bowanee river, between the foot of the Neilgherries and the Coimbatore District, is interesting. I must however say, that until reading it, I always fancied otters had not the slightest dread of crocodiles and, from what I had seen of an

attempt made by an alligator, to pull down a large spaniel in the river near Nagode in Central India, supposed that so active a swimmer as an otter would easily escape from the larger creature. Certainly both in Burmah and India otters are seen fishing, close to and apparently utterly regardless of alligators :—

" Another unusual thing about these fish was that the presence of otters seemed so little to disturb them, that I have taken fish from a pool through which a pack of otters had just passed.

There were a number of these animals in this river, and for some time I was puzzled to know how they and the crocodiles managed to get on together, as the latter have a peculiar weakness for dogs, (of which the otter is a distant sort of connection) and indeed are not fastidious about any animal not too large to be pulled under water. One day, when sitting on the bank among the jungle, I saw a number of otters fishing, and as I was much interested in watching their graceful motions, I kept perfectly still. About a hundred yards below where the otters were so busily at work I suddenly saw the snout and eyes of a crocodile steal above the water for a moment and then sink back. This occurred again, and so much nearer to the fishing party that it was evident he was stalking them, and I watched the result with much interest. After a short interval the crocodile rose again, about thirty yards from the otter ; but no sooner was the water broken by the hideous head of the reptile than an otter, which evidently was stationed on the opposite bank as a sentinel, sounded the alarm by a whistling sort of sound. In an instant those in the water rushed to the bank and disappeared among the jungle, no doubt much to the disgust of the mugger.* It was curious how instantly they seemed to know the form of danger by which they were menaced, and they evidently did so from their leaving the water, which was the very last thing they would have done had I suddenly shown myself."

As these are the very irregular notes of a vagrant, I trust to be pardoned for giving an account of the adventure of the spaniel just alluded to ; although the tale has nought to do with the wild mammals of India.

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* Hindustani for Alligator.—VAGRANT.

The bitch in question was a very powerful one for her size, and had a peculiarly deep-toned *English* bark ; (we know how sadly this degenerates in India) I mention this as the deep voice probably saved her life.

When the field division, I was then attached to, was encamped on the plain near Nagode ; I was one morning strolling in the neighbourhood of our camp and trying to induce a very fine Clumber spaniel to hunt for quail and painted partridges.

The bitch was however terribly "*gun-shy ;*" she had, I believe, been one of the famous Lucknow Garrison, and possibly her nerves had been affected by the horrors of war ; so, to re-assure her, I left my gun with my horsekeeper and took her to the river where there was a dark deep pool ; the morning was a very hot one, and she was thoroughly enjoying her swim, when, to my horror, I saw rapidly approaching her, against the stream, the triangular mark on the water which betokened the approach of an alligator : I called her of course but, thinking that I was about to throw something for her to fetch, she turned and swam quickly towards the alligator (which by this time I could see perfectly) ; thus meeting it face to face. As it tried to seize her by the head, it twisted its body and evidently attempted to upset her with its tail. The brute, hitherto accustomed to flight on the part of a victim, was perhaps cowed by the unexpected turn and rapid advance towards it of the bitch : I remembered afterwards that, as she was seized she reared almost out of the water which she struck hard with her strong forefeet, and that, at the same time, in her mortal fear, she uttered a deep bark.

This doubtless still more flurried her assailant while I, from the bank a few feet off, almost on the level of the water, probably assisted her by my howls and contortions. She was not pulled under and swam for dear life to me—accompanied, close at her side and shadow-like, by her demonical foe, I own, that when stooping to help her on to the stone on which I stood, I felt almost nervous for he might then, very easily have seized her, or made a snap at my arm. The spaniel bolted up the steep bank, but the alligator remained for some seconds with his head so close to the

flat rock on which I was that I could have touched him with a short spear or even a walking stick, had either been at hand, glaring meanwhile, with the most evil eye I have ever had turned on me, and then slowly and unwillingly sank at my feet. Long as is this tale, for it is, I feel, told most vilely, the entire performance did not take many seconds. All was throughout as visible to the eye as if it had taken place in the swimming bath of the Club at Madras; for the pool, although very deep, was not much broader and the water quite as clear. The alligator appeared between 5 and 6 feet long. He had cut the head of the bitch deeply in four places with his teeth. These wounds were speedily cured, not so those to her nerves; for many days elapsed before she would, unless compelled, leave my tent. I put several bullets into the alligators about this river, but did not bag one. There could hardly have been a better opportunity than this of observing the tactics of an alligator, and from it I am led to think that the otter, lithe and active as an eel, would, in the water, have little to dread from any rival swimmer.

Page 20, No. 16, *Water Fowl on the Chilka Lake.*

In corroboration of what I have written regarding the countless birds on this magnificent sheet of water: I need only say that, in one day's shooting between Burcool, the first bungalow in the Bengal Presidency and Rumba, which is on the Madras borders, a distance [I speak from memory, so may be wrong] of about 20 miles, I bagged, from my boat and with great ease, fifty grey and pintail duck, besides several teal and other water birds and a fine peacock which I saw on the shore and, having landed, got after a short stalk: I might have largely added to this bag of duck, but it would have been wanton cruelty on my part to do so; for the flesh of the birds was useless to me or my people who had more game than they could eat, and I merely shot up to the number here mentioned, in order to make a *bag*, a proceeding which I do not attempt to defend; but it is often hard to restrain the trigger finger.

Two or three days after this, at Priaghee, on the opposite side of the lake, I killed, in one afternoon, twenty-two curlew, one of the

most wary birds known of ; thirdly, in illustration of the utter disregard of man shown by some of the water fowl on this lake, I may mention, that, until going there I had never killed a pelican, nor one of the beautiful snake-birds, or darters as they are sometimes called, (Plotus melanogaster, Jerdon's birds of India, Vol. 3, No. 1008) and although most anxious to examine one of each, I really could not do so, for the birds swam so close to my canoe, as it was pushed about the shallows, or sat on the nets and fishing stakes and watched me with such confidence, or unconcern, thinking doubtless that I was merely a fisher less expert than they were ; that I had not heart to kill one of them ; my first pelican was shot several days after leaving the Chilka, but I certainly did, after some time, murder one of the darters.

I hope that I may not be supposed to write this from egotism, merely wish to illustrate what was said at page 20.

Wild geese both "barred-headed" and the "black-backed," Nos. 949 and 950, Vol. 3 of Jerdon's birds of India, are to be found in large flocks on the Chilka during the winter, and it is only at this season that any of the birds on this lake should be killed.

Since the above was written, I have seen in the *Bombay Times* of, I think, 14th June 1869, the following extract from an article in the *Madras Mail*, June 4th, on an Australian Meat-preserving Company, established with a view of exporting mutton, fresh and uncooked, to England. Perhaps the suggestion of the writer is worthy of consideration : I do not doubt the *quantity* of wild birds to be found on the Chilka, but I do mistrust their *quality*, having always thought the wild duck and curlew on the Chilka were oily and fishy, and the flesh of the snipe, great numbers of which could be killed on some of the black and muddy swamps about the lake, exceedingly bitter—this may be fancy on my part however.

"It is worthy of consideration, whether one of these methods of preserving meat could be turned to good purpose in this country. We have no beef or mutton to export from India, and if we could spare the little we have got, nobody would buy it ; but we have a large command of an article *de luxe*, which always obtains a ready

sale in the London markets, viz., wild-fowl ! Our large Indian lakes, tanks and jeels, at seasons teem with wild-fowl of delicious flavour, and if these birds could be packed whole upon the Australian plan, we have no doubt they would prove a very profitable speculation. To take the Chilka Lake north of Berhampore, as an example. The quantity of wild ducks, teal, snipes, &c., which annually swarm on this immense lake and its tributaries, is so great as to appear incredible to one who has not seen it. We imagine that with proper appliances, such as nets, decoys, and an organised staff of shikarries, provided with punts and duck guns, two hundred thousand head of wild-fowl might be easily "brought to pot" there in a single season—probably more—and assuming that each head taken, on an average, to be worth one shilling in the London market—a moderate computation, seeing that wild-ducks usually sell there at from seven to ten shillings a brace—the value of a season's operations would be £10,000.

*   *   *   *   *   *   *

As of the Chilka, so it may be said of the large Indian Lakes, that they abound with valuable game which is at present turned to little account, but which might be made profitable with attention and capital. If the Australian method of preserving meat by packing it in large cases, and pouring over it melted fat is a success as regards legs of mutton and sirloins of beef, there appears no reason why it should not equally be applicable to game, plucked and cleaned, which would pack better and more compactly. The experiment seems worthy of a trial. The *modus operandi* of preserving wild-fowl by thousands is apparently simple. No expensive buildings are required. A movable camp, some casks of mutton fat, a quantity of block tin, and a corps of shikarries, tinkers, and "pluckers," seems all that is requisite to enable the game to be properly stowed away for shipment to its Western market. Our generation has often wonderingly reflected on the luxurious extravagance of the old Romans—how they brought oysters from Britain, and peacocks from the East to their banquets, with very limited means for doing so at their disposal. But what Roman Prince, in all the pride of unlimited wealth, ever dreamt of the foreign luxuries which can furnish a London banquet in the 19th century at

the cost of five shillings a head ? Mutton from Australia, beef from America, game from India, salmon from Labrador, all these are within the range of possibility now-a-days at a London Tavern dinner, priced as above, and it is to be hoped that the great supply of food in all parts of the world, which as yet has been turned to little use, may ere long find a common market in London, not so much for the benefit of the rich as for the use of the poor man."

If the exportation of game from India as here proposed were in the least degree successful it would be one step towards a remedy for the greatest want of our Indian sportsmen ; the institution of game laws or, as that name is not a popular one, regulations for the protection of certain beasts and birds during a close or breeding season and for taxing guns, nets, &c.

Page 21, No. 17, *Lutra Auro Brunnea.*

Small Hill Otter.

Jerdon writes as follows of these otters :—

"Hodgson has described a small otter from the hills, as Lutra auro brunnea. Size small ; habit of body vermiform ; tail less than two-thirds of the length of the body ; toes and nails fully developed ; fur longish and rough. Color, rich chestnut-brown above, golden red below and on the extremities. Length, head and body, 20 to 22 inches ; tail, 12 to 13.

Blyth, in his catalogue, has No. 215, Lutra, very like L. nair, but specimens with adult dentition smaller by one-half or nearly so. Found only at great elevations in Ceylon. This is probably the same as the small otter of the Neilgherries, referred to by some writers in the *Bengal Sporting Review*, &c., by some called the black otter, by others the red one ; and is perhaps the same as Hodgson's L. auro brunnea."

I hope that by this time a specimen of the Neilgherry hill otter has been furnished to the Madras Museum, or that some lover of natural history will procure one for that institution :—

Since the first part of these notes was printed, I have found the small hill otters of the Neilgherries in the beautiful stream running out of the Kondahs, past the bungalow at the Avalanche. I saw

them just at dusk, but quite distinctly and close enough to feel nearly sure that they had white throats. I might easily have shot one, but did not like to disturb some deer which I had been trying to stalk in the valley the same evening. I have never come across them since: they struck me as being considerably larger than the small hill otters of the mountain streams of Upper Burmah, but I may be mistaken on this point for I have never seen the Burmah hill otter out of the water and seated on a stone, as was one of those I saw of the Avalanche river. These Neilgherry animals, like their Highland relations of Burmah, appeared to swim silently, not with the constant sharp, short squeaks of the common Indian otter. They were feeding busily; probably on water insects, crabs and small frogs: I do not think that there were any fish, except some very tiny minnows, near the pool in which they were.

Page 22, No. 18, *Lutra Leptonyx.*

I see that the Reverend F. Mason, in his work on the people and natural productions of Burmah, says that otters (Lutra leptonyx) abound in some of the streams, and that in the upper part of the Tenasserim, a dozen at a time may occasionally be seen on the rocks in the river. I think therefore I am right in supposing that the otters I have attempted to describe at page 22, were of this species.

Jerdon thus describes it:—

"The claws very minute, not projecting, but imbedded in the phalanx, the foremost upper præmolars often naturally wanting. The third and fourth toes exceed the others in length, and are more closely united. It was founded on a Cape species, "*Lutra inunguis.*" One is found in India extending into Malayana.

Description.—Above, earthy—brown or chesnut brown; lips, sides of head, chin, throat, and upper part of breast white, tinged with yellowish-grey. In young individuals the white of the lower parts is less distinct, sometimes very pale-brownish.

Length, head and body, 24 inches; tail 13; palm $2\frac{5}{8}$; planta $3\frac{1}{2}$.

This otter has been found throughout the Himalayas from the north-west to Sikim; also in Lower Bengal, in Arrakan, down to

the islands, &c., I saw one killed close to Calcutta at the edge of the salt-water lake. It had not previously been recorded from Lower Bengal."

Page 22, No. 19, *Felis tigris.*

The Tiger.

Jerdon does not remark that, the hair in some specimens of this animal is longer than in others ; but says, vide page 93, that some of both sexes are made more heavily than others with a greater development of the fold of skin along the belly, which adds to their apparent bulk. Mr. Francis Buckland, at page 263, Vol. 1, of the third series of his curiosities of natural history, appears to think that there is a second species of tiger which has not smooth hair but a rough hairy coat, and publishes some remarks on the long fur of the tigers of the Altai mountains and Oriental Siberia, by Mr. N. L. Austen, who says, that it would be interesting to ascertain whether the fur of Indian tigers becomes longer or thicker during the rainy season. About this it is difficult to give a reply, for very few tigers are killed during the rains ; but I feel sure that any sportsman who has had a good opportunity of seeing a tiger, dead or alive, on the Neilgherries, would tell him, that although there is no reason to suppose that the hill tigers differ in *species* from their relations of the plains, the fur all over is much longer and denser, thereby causing the wearers to appear much heavier and far more handsome than those of the low country.

I had an excellent opportunity of seeing a hill tiger not many months ago, but before giving my story shall avail myself of the following extracts from some admirable letters on the poachers of the Neilgherry hills written by my friend "Hawkeye" in the *South of India Observer* of the 26th November 1868 and some of the following issues :—

GAME,—OUR POACHERS.

"Let us turn to the poachers, and proceed with our pro-
"posed object in dealing with them, viz., relate what we know
"of their habits, particularly with reference to their ravages
"and destruction of game, interspersed with such anecdotes regard-

" ing the animals to whom this title applies, as we have been " able to collect or have occurred to us in our wanderings " over Southern India. The poachers are, first—the "Tiger;" " then, the "Leopard;" and last, though not least, the "Wild " Dog." We will take them in the above order and commence " with

THE TIGER.

" Of late years, tigers are more numerous on these mountains " than in former times; or, at any rate, they are oftener seen. " This may arise from the increase of inhabitants, travellers, " and sportsmen resorting to various parts of the hills that " formerly were left unexplored. It may also be attributable " to the clearings in the valleys below, having driven game of " all kinds to the summits, and in some degree to the increase " of the herds of cattle roaming over the country, affording as they " do an easy prey to this universal marauder. Whatever the " cause, there can be no doubt that where one tiger was " met with many years since, two or even three will be found " now-a-days. My own experience quite proves this; for fifteen " years ago, when constantly wandering over the same haunts " I have been visiting during my present sojourn here, I fell " in with only three tigers in twelve months; and latterly, during " a like period, I have come across ten at least, many more having " been seen during the same time by a fellow sportsman. Besides " those seen, many pass unobserved; the marvellous quickness " of this animal's sight enables him to detect the sportsman " five times out of six, without the latter being aware of the " tiger's presence; it is very rarely indeed that this keen-sighted " animal is caught unawares. It does, of course, happen at times; " but very seldom, especially in the open. I have been told of " instances where tigers have been killed while asleep, but these " occurred in parts of the country where they were seldom " disturbed; up here they are peculiarly alive to danger, and " generally speaking, are considered less bold than their *confreres* " in the plains below, skulking away from the presence of " man in a very ignominious manner. Man-eaters on these hills " are rare, the only case of one that I can call to mind happened

"some years back at Pykarra, not far from the Bungalow; "the animal took a fancy to a Todah in preference to the buffaloes "he was tending. Two of the Todahs' people were witnesses "of the affair, and they described how the tiger behaved like a cat "with a mouse, having caught the man, amused himself for some "time by letting him go, and then dodging him as the poor victim "tried to escape, before killing him outright, notwithstanding the "shouts and wailings of the two spectators. It is a moot question "concerning man-eating tigers as to what induces them to take to "preying on human beings; some affirm that it is only when age "overtakes the animal and he finds himself unable to cope with his "ordinary victims, deer or cattle, that he falls upon man, and it is "stated in support of this view that these man-eaters are mangy "and decrepid beasts, *sans* tooth, *sans* hair, and *sans* anything "and everything, that makes the tiger the formidable creature "he is in his prime; this is unquestionably partially true, "but man-eaters have also constantly been found to be sleek, "lusty, and in their full strength and vigour, quite as often "as the reverse; it is not therefore entirely dependant on age "and concomitant weakness that the tiger takes to this habit. I "think the argument advanced by many observers and naturalists, "that the animal, either accidentally or by press of hunger, having "once seized a man and found out what an easy capture he has "made, and in addition that the flesh is palatable, takes advantage "of this acquired knowledge, and thenceforth becomes that dreaded "being, a "man-eater," is equally reasonable with the former, and "may be accepted, perhaps, as the more probable of the two. But "let us take up the proposed view of this animal's character as a "poacher and destroyer of game before we discuss his homicidal pro-"pensities further. There are divers opinions as to the exact mode "by which the tiger takes his prey; popularly he is supposed to lie "in ambush and spring on his victim as it passes his lair, or watch-"ing by a pool await the arrival of animals in quest of water. "These would offer but precarious chances, even to so cunning and "stealthy a foe as the tiger, as all wild animals are so wonderfully "cautious in their approaches to such resorts. The tiger too "betrays his presence to them by that peculiar smell attaching to

" him, so that the odds are greatly against our striped friend's suc-" cess, though, of course, he occasionally is rewarded by catching " some unwary, over-thirsty animal that rushes to the water heed-" less of consequences ; but this will not apply to the tiger on these " hills, where no paucity of water ever occurs to such an extent as " to drive the game to any one spot to drink—that the tiger's " principal food is game, and here very generally that game is the " sambur, there can be little question, but how he takes it is not " well known and perhaps may never have been witnessed by any " one ; at any rate in making these remarks I hope in case any of " your readers can give an instance of such observation of a capture " he will do so,—I have never yet met any one who could—at the " same time I may relate what occurred near Kotagherry to two " sportsmen who were on the watch for tigers one evening. While " waiting near a sholah, they heard the grunting of a wild boar and " presently observed the animal approaching, evidently in an excit-" ed and angry mood ; almost at the same moment a tigress sprang " through the air and alighted on the boar's back ; then took place a " fierce fight, fast and furious, the boar manfully fighting for his " life against his terrific antagonist ; while it was going on, one of " the sportsmen fired at the tigress and the combatants separated, " but the boar was heard to give that peculiar squeal during " the battle which only escapes from this indomitable and sturdy " animal when mortally wounded ; nevertheless, nothing could be " found of either hog or tigress on the following day, though " there were traces showing that both had been wounded. As " this case, however, was a sort of running fight between these " animals, it cannot be quoted as a specimen of the mode in which " the tiger usually captures his prey. The feline was supposed to " be a tigress, because shortly afterwards, a buffaloe having been " killed in the neighbourhood, one of the sportsmen alluded to sat " over the carcase, and was highly amused at seeing four cubs not " bigger than good sized cats, attack the dead buffaloe most " furiously, at the same time spitting and swearing and fighting " one with another, in the fiercest manner imaginable.

" I have a theory of my own on this point—let us ventilate " it. In the first place, the tiger must have room to spring on his

"victim in the sholahs on these hills; many are sufficiently "clear to afford this, and no doubt he takes advantage of such "spots when a chance offers in them, but in general, the "woods are dense with under-growth, interspersed with trees "so close together, that the spring of a tiger, and the power of his "blow must, I should say, be greatly interfered with; then again "his presence as beforesaid, is so liable to be detected by the deer "that his chances of capture are remote, but at night the deer are "out in the open, and then perhaps the wind being by chance "in his favor he may succeed, and I am disposed to believe "that this is the most likely time for him to do so, though he is in "no way restricted as to time or place, for he slays the Todahs' "buffaloe oftener during the day than during the night and at "times close to their habitations. Sambur are remarkably "cautious on entering sholahs, and the faintest taint of the "tiger will deter them doing so; only a few days ago a sportsman "witnessed a case in point,—from a long distance a tiger was "observed crossing a ridge of a hill, pass down to the edge "of a long but narrow sholah, along the outside of which he "prowled up the whole length of it and disappeared; sometime "after a stag appeared over the crest of the hill, not very far from "where the tiger had passed and immediately gave signs, by "cocking his tail and erecting the bristly hair along his back, that "he was aware of the enemy's presence; he forthwith retreated, "but presently re-appeared some way below where he had first "essayed to pass on to the sholah; again the offensive odour "assailed his delicate organs, once more he went back, making "yet another attempt though with the same result still further "down, meanwnile the watcher of all these manœuvres had "gradually approached; the stag at last reached a point where "he could no longer scent his foe, but, alas! poor brute! he had "only escaped from the frying-pan into the fire; for a deadly shot "from the unerring rifle of the keen sportsman on his trail, laid "him low. Now it is this acute sense of smell that the tiger has to "contend with, before he can provide his larder with game, and "how does he manage it? We cannot give him the credit of the "intellect of man, who, on his pursuit of game, is well aware that

"nothing can be done "down wind;" were it so, not a sambur "would be left alive; the tiger would bag them all just as he "pleased,—in fact, he would then be able to kill any deer "when he wanted him. Given that point, how does he con- "trive to kill so many and keep himself so fat and sleek? No "doubt he pounces on many an unwary calf, too young to follow "the protecting guidance of its mother, and so left in some secret "spot till strong enough to go a-field with its parent. Many of "these tender morsels Mr. Tiger treats himself to; but these will "not suffice for his voracious maw; he must have stronger meat "and a more lasting supply. We will suppose a tiger requires for "himself one sambur in ten days, but when in company with "his wife, we may safely say they will require double that, and "then again, if accompanied by the family, as was observed on one "occasion not very long ago, where the party amounted to five,* all "very nearly full-grown,—what amount of game to satisfy their "rapacity would be necessary! Truly it is beyond our calculation the "extent of mischief such a herd of marauders would perpetrate; "but all this does not bring us nearer to the point at issue,—how "does the tiger take his prey? We have so far considered "the acuteness on the part of the game to ensure them against total "destruction, and I have only one further observation to record, "and that is, how constantly the presence of a tiger is indicated by "the actions of sambur; if disturbed by him in a sholah during the "day-time, the deer immediately resort to the open, watching with "intense eagerness the wood they have quitted, and generally "warning the neighbourhood with loud consecutive bells; the sports- "man readily recognises these sounds and can safely pronounce on "the whereabouts of the tiger; it is on this fact,—of deer giving "this warning notice, that I have based one, or rather part of my "theory regarding the tiger,—let us see how it is borne out. "That the tiger is stealthy and quiet in his movements we all know, "that velvet paw of his, so soft and yet so formidable, enables him "to thread the woods and forests so noiselessly that even the sharp- "eared deer may often be taken by surprise and fall a victim to its "blow; and but for the tell-tale scent emanating from his striped hide

* See page 22 of these notes.—VAGRANT.

"numbers would be destroyed—that he, when hungry and sharp-"set, is always on the prowl there can be no question, and it is on "these occasions that he is supposed to adopt a very wily plan to "secure his food. On a late occasion when a well-known sports-"man killed a fine tiger at Tippacadoo, he was attracted to the spot "by the "belling" of sambur and "call" of the spotted deer; "on quietly approaching he perceived the tiger lying down under "some bamboos, watching or listening to the spotted deer who "kept on calling; before any result could be observed a well-"planted ball slew the tiger in his couch. It then however "occurred to him that it was not at all improbable that this act of "the tiger lying down calmly in sight or hearing of his prey might "be one of his devices to allure the game within reach; we know "how proverbial the curiosity of deer is, and how when uncertain "of the object before them, they will at times advance toward it; "in the sambur this is constantly the case, and may it not be that "the tiger is aware of this propensity, and so like jacko and "the crows, feign sleep or death to attract the unwary and "inquisitive victims? for my part there is, I think, great pro-"bability that this is one of Mr. Tiger's dodges. That he also "tries his speed at times, the following instance, communicated by "the tiger-killer in question, is good proof. One afternoon on "reaching the summit of a high hill, commanding a well-known "valley for game, he spied three or four sambur in a swamp "below, he noticed that they were on the *qui vive*, and could not "divine the cause, especially as what appeared to be another, "and from its size a stag was lying down in the swamp, not "very far from the deer. On turning the glass on this object, "to his surprise he saw it was a grand tiger, and while in the very "act of looking at him, he saw him gather himself up, and with "three or four magnificent bounds fly through the air in the "direction of the sambur;* the latter were, however, too quick for "their agile foe, and scampering off, got safe away. The tiger "crouched sulkily where they had been, and on the hunter appear-"ing some two or three hundred yards off, he was away like

*Vide page 22 of these notes.—VAGRANT.

"a shot. Now this, I consider, as very probably the manner "in which the tiger on these hills takes his prey at night, and "we can imagine it to be most destructive. Whether I have "a right to designate this "Royal animal" an arrant "Poacher," "where he is only engaged in the lawful pursuit which nature has "accorded to him, I don't know! but that the rascal kills no "end of game without leave or license, is plain enough, and under "that I dub him "Poacher" and a desperate one too!"

"Tigers are not particular as to the state of their food being fresh "or otherwise. It was observed on the Annamallies that these "animals seldom—indeed never—were found to resort to the car-"cases of the bison that had been shot, until the effluvia from "them was exceedingly strong, indeed, it may be said when in the "*highest* state of putrefaction; and, on one occasion, when the "tiger had dragged the putrefied carcass some distance, the sports-"man was able to follow it up to the spot by the scent, and found "the tiger quietly reposing close to the offensive remnants of the "bison. Whether this feature in the character of the tiger is "restricted to the Annamallies, or may be attributable to the wide "range of forest land extending for miles over hill and dale, "through which the tigers there may roam, far distant from the "kill to which he is eventually attracted by its decomposition, I "cannot say; but we know that whenever he kills game or cattle, "if undisturbed, he returns to his prey, until (with or without "the help of jackals or vultures) the whole is consumed; and it "must then be pretty "high." In many cases it has been noticed "that he makes his lair conveniently near at hand, to prevent the "intrusion of any such assistants in the demolition of the carcass; "on one occasion I was present, when the noise of the descent of "a large number of vultures on a dead buffalo, lying just outside a "sholah, caused the tiger who had killed it to put in an appearance "at noon-day, and protect his rights to the beef from the feathered "tribe; and not one of the birds would go near the body so long "as Mr. Stripes was in sight. In a sholah near Peermund, a "regular larder was found, to which a tiger had frequently resorted "and apparently dragged his game, there to devour it at con-"venience; the large quantity of bones and remnants proving how

"destructive a poacher his royal highness can be. It is evident, "from a tiger's droppings, that he usually consumes the whole of "the animal he slays, even to the very skin, as he voids large "quantities of hair, on these hills it is invariably the hair of "the sambur, so it follows again that he is a poacher of the "first magnitude: that he will take a jungle-sheep or an ibex "when he can get them, there can be little doubt. Of the latter— "the ibex*—there is a case in point; a gentleman having shot an "ibex in the evening, it had fallen or escaped wounded some dis- "tance down a rocky hill in the direction of the forest below, and "it being too dark to prosecute the search that evening, it was left "till the following morning, when, to the surprise of the sports- "man, he found the animal half-eaten; and in looking up the "traces of the spoiler, found him in the shape of a royal tiger, "quietly reposing after his full meal beneath a tree close to the "edge of the wood, he paid the penalty of his interference with "other men's goods with his life; and a very fine tiger he proved "to be. I omitted in my last to record another instance of crafti- "ness on the part of the tiger in approaching his game, and which, "I am told, the natives firmly believe in. It is stated by them "that the tiger is often heard to reply to the bell of a sambur or "call of a deer, and that he does so with a low muttering growl, "or sometimes with a short impatient grunt; at the same time "stealing on quietly towards the sound of the deer's call. This "answer of his seems to elicit a reply from the deer, and so the "tiger, ascertaining with tolerable precision the position of his "prey, is guided accordingly, stops his growling, and perchance "secures a victim. Whether any shikaree has actually witnessed "a capture under these circumstances, I am unable to say; but I "have the confirmation of the fact of the tiger replying to the "belling of sambur from more than one sportsman up here; and "the natives' reason for the tiger adopting this stratagem appears "plausible enough.

"Many years ago, there was a celebrated "man-eater" in Tin- "nevelly, of whose career I have something to tell. He com-

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* See page 157.—VAGRANT.

"menced his depredations on man and womankind in the jungles
"near the "Arengowl Pass," and he continued his devastations for
"more than a twelvemonth, to the terror of the neighbourhood and
"all travellers through the pass, where there was considerable
"traffic. I became acquainted with this scourge at the outset of
"his homicidal propensities; I was prowling about the skirts of
"the jungle near the pass in question one evening, for deer, pea-
"fowl, and the like, when I was shouted to by a native, who on
"my approaching, told me to be careful and not enter the jungle
"there, as a tiger had, only a few hours before, taken away his
"(the native's) companion, while they were tending their charcoal-
"burning; and that he had only just found the remains of the
"poor man, more than half-eaten, in the thicket close by. On my
"asking what he had done with them, he naively replied that he
"had burnt them according to Hindoo custom, by putting them
"into the charcoal fire; and he added that this was the fifth
"victim that the tiger had killed. I left that part of the country
"shortly after, but returned through that very pass about a year
"subsequently, when I found the man-eater had become notorious.
"I was warned that the ghaut was dangerous, and I came down it
"rifle in hand, with my horse following, hoping, if the tiger did
"come, that horse-flesh, or even horse-keeper's, might be more
"attractive than mine; however, he did not show, either having
"lately killed some one, or perhaps indulging in a siesta—for it
"was mid-day;—and we all got safely through the dreaded pass.
"At the village I heard that he had killed nearly one hundred per-
"sons, and that there was a reward of two or three hundred rupees
"offered for him. In those days money was money! and such a
"reward called forth the ingenuity of sundry avaricious natives to
"gain possession of it. Some tigers were trapped, one or two
"shot, and as the man-eater had been described as a mangy hair-
"less brute, these captures were in various ways disguised by
"shaving, scalding, &c., to make the Collector or his assistants
"believe that the real Simon Pure had at last been caught. One
"sly old fellow very nearly succeeded, but that spirit of distrust
"amongst themselves which enables us to hold possession of India,
"cropped out even in such a trivial case, and the crafty old chief

"of a Poligar was told on, and he only got the usual reward for an "ordinary tiger. People at last got so frightened that they would "only proceed through the pass in question in large gangs, usually "accompanied by droves of pack bullocks, in hopes that a bullock "might pay the penalty instead of one of themselves; but all was "of no avail; the tiger on several occasions, rushed through the "crowd of bullocks and men, seized a driver, and disappeared in "the jungle, which, reaching the very edge of the roadway, "afforded great facilities to the dreaded animal; this repeatedly "occurred. The tappal-runners also suffered, though accompanied "by a man with a horn or tom-tom, and at times by armed men. "At last three shikarries resolved to do or die—little they antici-"pated the result of their resolution—to slay this terror of their "world they determined; so, providing themselves with food for "three days, they stole up to their posts in the ghaut, to watch for "the dreaded enemy night and day. Nothing was seen of the "tiger during their long vigil, and they felt very confident that at "last he had quitted that part of the country; at any rate, in this "assurance they were returning down the pass all together, when "suddenly out sprang the tiger and carried away one of the three, "and disappeared with him before the eyes of his companions who "were unable to afford the slightest assistance. This tiger was never "caught; he was, from all accounts, a very old and wary animal. "That he was aged and weak—though some attributed his appear-"ance to the supposed deteriorating influence of human flesh—his "last act sufficiently proved: he attacked a tappal-runner, who was "accompanied by a man with one of those long colloroy horns. "The tiger was described as being nearly white; but, although he "scratched the runner down the back and arms, he appeared unable "to bite him, and the two succeeded in escaping from their "assailant, with only trifling wounds. The man-eater of the "Arengowl Ghaut was not again seen or heard of from that day.

"Tigers have been known to prey on their own tribe; an instance "of a leopard half-eaten by the side of a kill by a tiger having "been observed; and there were evident traces of a struggle "having taken place. Whether the tiger ate his enemy out of "revenge, or found him fresher and more tasty than the body over

"which they had fought "deponent sayeth not;" but though "strange, it is not uncommon, either with the hairy or the feathered "tribes,—birds of prey doing the same, for I shot a falcon in the "act of feeding on a kestrel it had struck down. Another instance "is known of a tiger having killed a young tiger over a dead "bullock, and partly eaten him.

"There is a peculiar and singular distinction in regard to the "mode of breaking up their prey, between the tiger and the "panther; the former invariably commencing on the hind-quarters "of the animal slain, and the latter at the fore-quarter or chest. "There is no reason known for this strange difference; but it is a "well established fact, and perfectly recognised by the natives, "who will, without hesitation, pronounce which animal is the "culprit by observing these particulars.

"Tigers are very difficult to stalk, and very few sportsmen have "succeeded in bringing to bag any of these animals by a fair stalk; "the keenness of his vision, as before alluded to, renders it almost "impossible to approach him without being observed: of course "there have been exceptions, but very rarely. At times the "tables are turned, and the tiger has been observed stalking his "enemy, man, but quite in ignorance at the time. The first tiger "I ever saw, was walking down a path towards me; I could not "make out, in the early dawn, what animal was approaching, so "squatted behind some slender-stemmed trees bordering the path; "the action caught the quick sight of the animal, who immediately "followed suit and sat down on his tail, and then only I knew that "it was a tiger. I would not fire at the animal facing me, know-"ing the danger in case of only wounding, so there we sat, he "some seventy yards off. After peering at me for some time, "unable to make me out, and little expecting, I fancy, the presence "of man in those wild western ghauts, he at last came crouching "towards me, moving along in a serpentine direction, first to the "right, then to the left, still with keen gaze trying to find out "what I could be. After he had come on some eight or ten paces, "I thought it time for action and stood up; immediately I did so, "the tiger, clapping his tail between his legs, ignobly rushed into "the jungle, and, oh! what a coward I felt myself to be! and yet

"it was but the old story of the hog-hunter, who, when twitted "with riding more steadily than he had been accustomed to over "the rotten cotton ground of the Dekkan, excused himself in "acknowledging that it was so by making this remarkable confes- "sion : "The fact is, my dear fellows, that now-a-days, whenever "I am galloping over this infernal ground, I see the faces of my "wife and children peeping out of every cranny and hole as I go "along."

"This, my first tiger I had ever seen, reminds me that oft'times "some lady friends have expressed great desire to be shown a "tiger, and one even went so far as to declare her wish to shoot "one : their idea was that nothing could be easier than to go out a "few miles with an experienced sportsman, and be shown tigers to "any amount. When I tell them that for over nineteen years I "wandered through forests, over mountains, searched hill and "dale for all those years, and never set eyes on a tiger till I met "the one above referred to in the Southern Mahratta country, they "will see it is not so simple a matter as they imagine. Never- "theless, tigers are often met with when least expected ; there "was a story prevalent here many years ago, that a Bengal "Civilian out shooting, was sitting watching a wood being "beaten, when out walked a tiger ; the gentleman stole away, and "hid himself till the tiger had passed, and then resumed his post, "but he had not long been there, before another tiger appeared, "and still closer to him. This was too much, so away Mr.* "went, and was not to be persuaded to watch any more that day. "A similar story is told of our present Advocate General, who "when out for woodcock, suddenly observed a tiger coming his "way ; he too declined further acquaintance, and took himself "home with the remark that "he came to shoot cock, not to be "eaten by tigers ;" but to return. Another instance of a tiger "unknowingly stalking a man, happened a few years ago, when a "sportsman returning in the dusk, mounted on a dark-colored "pony, was followed by a tiger, who on the side of the hill, kept "parallel with the rider, evidently mistaking the pony for a sam- "bur, and so continued alongside some sixty or eighty yards off

* Vide page 199.

" waiting an opportunity for a rush, when, on turning out of the " shadow of the hill, he detected the rider, and instantly made off; " it was unpleasant while it lasted, for the horseman was unarmed.

" The formidable power of the tiger is well known; to his " great strength is added his ponderous weight, and I can well " understand how even the large and powerful buffaloes of the " Todahs are an easy prey to him. The first time I witnessed a " specimen of his strength was on the occasion of a large stag " having been killed by a fellow-sportsman in the valley behind " Dodabet. The stag fell into a stream, and though we mustered " all hands, dog-boys and horse-keepers, two sepoys, and our two " selves, with dog-chains round legs and antlers, all we could do " was to get the animal clear of the water, but up the bank we " could not raise it; this was in the evening, and the next morn-" ing, when we reached the spot, the stag was gone. Taking up " the track, it led into the nearest wood, and there we found our " game half-eaten, with his antlers locked between the stems of " two trees, which alone prevented the tiger taking the stag clean " away to some more convenient feeding spot. Having eaten so " much, we thought it probable Mr. Tiger was taking a snooze " close by, and began prowling on hands and knees through the " thick tangled undergrowth of the shola—a most insane proceed-" ing, but there was no " wife and children" in those days,— " nothing came of it, so we took possession of the mangled " remains, and went on our way to look for sport elsewhere. I " have heard of another case demonstrative of the great power and " activity of the tiger. In escaping from a beat, one was seen to " leap clean over a man, apparently without touching him; but " the man fell, and on going up, it was found that a blow from " that dreaded paw in passing had completely dislocated the man's " neck; another case happened near Bellary, to a beater, who " while watching a ravine on one side, had not observed a tiger " coming up another ravine behind him. The tiger seems to have " thought this a fine opportunity for a game of leap-frog, for he " was seen to put his paws on the beater's back, and in the most " elegant and playful manner, bound over him into the dell below. " The state of that man's back was dreadful to look at; he

"recovered however, and I saw him sometime afterwards, fearfully "scarred and with a stiff arm, but he joined the beaters as merrily "as any of them. I once saw a buffalo very shortly after it had "been struck by a tiger, close to the spot I was encamped at; the "animal was still alive and standing up; he had been struck in "the shoulder, where the flesh was a mass of pulp, the leg useless, "and a bite through the windpipe caused the animal, when it "breathed, to swell out all under the skin till it looked enormous. "It died soon after, and I watched over the carcass till dark, but "there being no moon, I had to leave the spot; the next morning "the buffalo had been dragged down into a ravine, and all the "hind-quarters demolished. Notwithstanding all this and all that "can be said against the tiger as a poacher,—cowardly thief, and "everything else that is bad,—what a royal beast he is! especially "when seen in his glory of full liberty and freedom, wandering "over these grand hills. I saw one such sight, on an evening "returning from a distant excursion, on reaching the summit of a "hill overlooking a wide expanse of undulating vallies, interspersed "with woods and streams; there in a sunny glade, with the "declining rays of the evening sun glancing on his tawny striped "skin, was a splendid tiger, walking calmly and quietly along in "all the security of the solitude of the place, little dreaming of the "presence of danger or the admiring though anxious eyes that "were fixed upon him. It was one of those sights which retain "their hold on the memory so long as life itself lasts. What a "beautiful picture it was!!"

HAWKEYE.

One could hardly wish for better illustrations of the habits of wild animals than those furnished by the notes of my friend HAWKEYE who, in its own wild haunts, has formed so thorough and intimate an acquaintance with each one of which he writes. Within the last few days, I have been told of one instance when three officers from this station (Kamptee, hot season, 1869) and their attendants witnessed, from first to last, the successful stalk of a cow by a tigress and the kill that followed. As a wind-up, the sportsmen had then the satisfaction of avenging the death of the

cow by slaying her murderess, if it be not unfair so to term her. One of them most kindly gave me the following account of this magnificent scene; the paper will, I believe, appear in the *Indian Sporting Magazine*, and with it an account of the deaths of some more tigers; not a difficult task for any one of these three sportsmen to furnish, for during their trip they killed, without elephants, no less than sixteen tigers and one panther.

He* writes thus:—

"My dear Colonel,"

"Here is the rough copy of the "Tigress stalk" that I am send-"ing to the *Sporting Magazine*.

Yours sincerely,

* * *

"12th May 1869, Camp Watoli on the Pen Gunga."

We had been tempted off of our proposed line of route, while on the march on the 11th by the receipt of news of a tiger which had killed two village cows in the bed of the river near the village of Pipulkulti, and encamping at Watoli had sent our Shikari to tie up buffaloes near Pipulkulti and also near Amba a village in the opposite direction near which we had a "*kill*" about a week previous.

The news came in early from both directions, nothing from Amba and "*no kill*," also from Pipulkulti: but Shaikh Boden, our head Shikari, who had inspected the latter place had found fresh tracks, so we determined to try our luck and started after breakfast with about 20 coolies for a beat.

One mile below Pipulkulti the Pen Gunga averages in breadth from 400 to 500 yards, where a large nullah† runs into it from the Berar side.

In the bed of the river there are a number of small flat islands covered with a description of cypress grass, affording sufficient cover for a tiger to take refuge in.

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* I am not at liberty to give his name, but I have the pleasure of meeting two of the party every day and can vouch for the story.

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† Nullah is an Indian term of the most comprehensive signification used in speaking of any channel or water course and applied alike to a small river or deep ravine, to the sandy bed of a dried up stream or a wet gutter.

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Shaikh Boden proposed beating diagonally up the bed of the river, and that we should post ourselves half-way down the bank, behind some bushes on the "*up*" extremity of the cover, the disposition of the islands, on which was the only cover, being such, that the chances were greatly in favor of the tiger being forced within easy range : which plan we agreed to pursue and were walking along the Northern bank on our way to our posts when we were stopped by the cry of "*Bagh hai;*" and looking down to the bed of the river saw, what apparently was, a very large tiger stalking a herd of cattle that had come down to water. We crouched down and had the luck to see the whole business. The tigress, as she proved to be, when first seen, was stealthily stalking a white cow which was some little way off from the main body of the herd, and, taking advantage of the slightly undulating bed of the river, had probably approached across an open space of perhaps five hundred yards before this cow had seen her, the rest of the herd were behind one of the islands and could not yet see the enemy. The white cow allowed the tigress to approach to within about 80 yards before she appeared to notice her danger, and at first seemed to be fascinated by the appearance of the brute creeping towards her, and it was only when the tigress commenced to increase her pace to a trot that the cow made off, the trot increased immediately to a lumbering gallop as the tigress had now got on to the firmer ground that surrounded the islands, and in a very short time she skirted over a small ridge into close proximity of the herd which was then commencing to scatter on the news received from the white cow. The gallop turned into a charge, and in a few seconds the tigress had picked out a fine young cow, on whose back she sprang—and they both rolled over together in a heap. When the two animals were still again, we could distinctly see the cow standing up with her neck embraced by the tigress, who was evidently sucking her jugular, the poor cow made a few feeble efforts to release herself which the tigress resented—by breaking her neck. The remainder of the herd, some 20 in number, after rushing wildly away, now returned to within 50 yards of the tigress who was silently slacking her thirst off the cow—and stood looking on in a heap at the unexpected arrangement : finding after

a few minutes' survey that the animal embracing the cow was probably a dangerous one, they scuttled up the south bank and commenced grazing immediately.

Our first idea was to go down and try and stalk the tigress whilst still on the slaughtered animal, but Shaikh Boden recommended sitting still as the ground was very unfavorable ; and we should certainly frighten her away before we could get within shot, even supposing she remained on the cow long enough to allow us time to walk round : so we sat quiet, and had the satisfaction in a few minutes of seeing the tigress leave her prey and move slowly away ; creeping round the small bit of cover where she had killed, she walked back over her stalk to a pool of water at the east extremity of the islands where we lost sight of her.

As the tigress had retreated into the very part of the cover where Shaikh Boden had first expected to find her, we had merely to follow out the original idea of the beat—and we posted ourselves about half-way down the bank under a couple of small trees.

The tigress turned up almost to the first shout of the beaters and made straight towards A, turning off when opposite to where he was sitting moved nearly parallel to the bank in O.'s and my direction (we were under the same tree) and brought up in a small crack between two islands opposite to us about 80 yards off, and looked round in the direction of the beaters : as this seemed the best chance we should get, we agreed to open fire—I fired first and rolled her over, and O. got two difficult shots as she was galloping up a small bank, over which she disappeared. "We then went down, and after a short search found the tigress lying dead in the cypress grass."

As far as I know the grand and savage spectacle my friend has just told us of—has never been equalled as an insight into the tiger's mode of taking its prey. I have never heard a native hunter, and these men have of course better opportunities than others of witnessing wild sights, mention a similar case, or even one at all approaching it. Here nothing was left incomplete : the three sportsmen looked on at their ease at the stalk, could see both destroyer and victim, and how the former took advantage of ground, even to decreasing her pace from gallop to trot, as a wary

horseman does, when the sand was heavy, they then, after seeing the "*kill*" at their leisure, watched the tigress return to her original covert near the water, whence, last, not least, they stirred her forth to meet her death.

I have lately been fortunate enough to be able to watch a tiger for some time; and relate the incident, not that it is worth anything in itself, but because it may serve to illustrate in some way the cat-like tactics of the animal.

A few months ago, on the 17th of November 1868, while going to look for ibex, I was passing over the large hill in front of the Avalanche bungalow on the Kondahs, so often mentioned in these notes. Suddenly my gun carrier, a man well known at Ootacamund, asked me for my glass and whispered that he could see a tiger crossing a bare ridge about half a mile off; his assistant corroborated this, but even with the glass, I could not succeed in making out what these two men had discovered with the naked eye. I fancy that I have as strong and quick vision as most men, backed by fair practice in observing wild animals; and on this occasion I own I thought the men were attempting to deceive me in order to restore my temper which had been sorely ruffled by them the day before. They insisted that they saw a large tiger, not a panther as I suggested it might be, and, when it passed out of view, agreed that we should probably come on it again by skirting another spur of the hill: I consented to this, although without placing the slightest faith in what they said. Presently, however, there was no doubt that they were right, for about five or six hundred yards from us, appeared the tiger, a magnificent hill-animal, looking in his Neilgherry winter clothing much heavier and shorter on the leg than any of his brethren of the plains ever do. He was quietly crossing a bare and rather rocky ridge, evidently looking out keenly for his breakfast and taking advantage of every inch of cover much, with all reverence be it said, as a cat in a cabbage garden looks out for sparrows. He sank nearly to a crouching position before attempting to top any ridge or hillock; and thus, with all but his head concealed, cautiously surveyed the ground in his front; to us, on his flank, he was perfectly visible. It may have been by chance, but, as he was then working, he was

able to take as much advantage of the wind as the most scientific deer stalker could have done. Twice he crouched in a half-sitting half-recumbent posture, which reminded me much of one of the quaint monsters of heraldry, and gazed, long and anxiously, over the valley between us, at the brow of the spur, whereon my two men and I were stretched as flat as we could lay ourselves. He evidently suspected that there was something uncanny there, but luckily the wind was blowing strong from him to us and moving the scanty grass sufficiently to puzzle his vision. The light shone full upon him and in the clear mountain atmosphere, which, I am not wise enough to explain why, always causes objects to appear nearer than they really are, even without the glass, one could almost have counted the stripes on his sleek and glossy coat. He must have remained in view for many minutes as he quietly passed along the mountain side ; and when he disappeared, my men with admirable knowledge of ground, took me as fast as we could run to a spot which would, they said, cross his path. He must have increased his pace during this interval, or he may have discovered that there was something wrong in the air, for, notwithstanding that we had only a short way to go in comparison to his, he was at a rapid trot, or *run* would be a more correct term for the pace, and coming direct for us, just topping one hillock as our eyes rose to a level with the summit of the opposite one : we were in Indian file and dropped down on the grass without a whisper. This attracted his attention—but he could not make us out and, probably taking us, in our grey shooting clothes, for pigs or ibex at rest, commenced to stalk up to us most carefully. He was about 130 yards from us with one of the beautiful Kondah glens between : on his hill and about 15 or 20 yards in his front was a single rhododendron, about the same distance on mine was a small clump of three or four of those lovely shrubs, then glowing in all the full glory of their deep red blossoms,* he dropped on his belly at once and thus crept onwards to his bush while I, making myself as snake like as I could, contrived to get forward to my clump. Thus stalking each

* There are two varieties of this beautiful tree on the Neilgherries; the gorgeous red one is to be found everywhere, but there is a second species of a lilac tint which is, I think, much more rare.

VAGRANT.

other, so to speak, we mutually managed to decrease the distance between us. It was almost in vain however for the cunning brute kept his rhododendron stump so pertinaciously before him, that although I had a perfect view of his hind-quarters beyond it and he was facing me, I could not, although in a most favorable position to aim, get a shot at his chest. I think he would have come on beyond it had not one of my men tried to crawl after me ; this caused him to jump up : as he turned I broke his hind leg—but although this stopped him so much that I managed to get up to him again and have two shots, one of them a very bad miss ; he still lives to prey on the Todah buffaloes. I would rather however have seen what I did then and have missed him altogether than have killed him without such a rare opportunity of watching a tiger.

I beseech that I may not be considered egotistical for telling this long story. There was nothing in its incidents which a nursery maid with an infant in her arms might, if she could have got to the spot, not have looked calmly on at, for, when we were thus crawling towards each other, to get much nearer me he would have had to go down one bare hill-side and up another ; a feat which no wild animal would attempt, not to mention that I had with me and my men three breech-loaders, which, even if I had missed him every time I pulled the trigger, would have made more noise than the nerves of the stoutest tiger would have been equal to.

Another cat-like habit of tigers is not often mentioned by sportsmen, although most of us must be well acquainted with the marks produced by it : I mean scratching or scoring trunks of trees with their claws, much as an ill-disposed cat sometimes does furniture. At one time I fancied that the animals merely did this by rearing against the trunk and certainly never suspected that they are in the habit of returning to the same tree for this purpose : I am now sure however that the latter is the case and am convinced that they not only rear, but climb, or rather run up the tree until they get a good hold for their claws near some fork or bough ; why I am not prepared to say. A few months ago, while shooting on the Neilgherries with a friend, often quoted in

these notes, he mentioned a tree to which tigers constantly resorted for this purpose and, in order to show me the height at which they left their marks, took me to it: we found the tree not only most deeply and freshly scored many feet up the trunk, I think ten if not nearly twelve, I did not take a note of the height at the time, so may be wrong ; but marks of tiger's hair left where the owner had evidently been clinging, cat-like, to the trunk far above any man's height : I took from the bark, at least eight feet from the ground, a portion of a tiger's claw : this may support the native theory that their purpose in thus marking trees is to sharpen their claws : why they should trouble themselves by returning to a particular tree for this purpose, is more than I can suggest.

The animals, for judging from the marks, there must have been at least two of them—had apparently, not many hours before indulged in a regular game of romps at the trunk of this their favorite tree by rushing at it from across a small path and, with the impetus thus acquired, attempting to vie with each other in getting up it. What a grand bit of sport it would be to come suddenly upon them while thus engaged ! !

The following letter, published in the *South of India Observer* of the 25th of March 1869, may not be thought misapropos here. I am certain I know the writer, and that he is a dear comrade and brother sportsman referred to in these pages and a far better naturalist than I am : at any rate I know that the details of the encounter between the tiger and the wild dogs he mentions are exactly as he tells them. I was at Ootacamund when it occurred, and a few days after had the particulars of the scene related to me by the eye-witness, a mutual friend. The story is an interesting one as it corroborates so much that sportsmen know and naturalists hear of the habits of both the tiger and the wild dog :—

" I think the letters of " HAWKEYE" and " VAGRANT" must have " excited an interest in sport and natural history amongst some of " your readers. I therefore venture to write on a subject that has " puzzled me for many a year, viz., the statement so often made " by native shikarees, that wild dogs will attack and *kill* a tiger " I never could believe that they would even attack him, and

" was under the impression that by driving the deer from their " accustomed haunts, they drove away the tigers also ; however, I " have recently heard from a friend a most interesting account of a " scene that he witnessed between a pack of wild dogs and a tiger ; " I was in hopes he would have sent it to you himself, but as he " has not done so, I trust he will have no objection to my " publishing it.

" My friend, not many weeks ago, was passing through a jungle " in Wynaad, when he heard, close to him, a curious snapping " noise ; he fancied it was paroquets or some such birds having a " row amongst themselves ; but on taking a few steps forward, to " his no small astonishment, he found himself in the presence of a " tiger, surrounded by a pack of wild dogs, snapping and barking " at him, but, at the same time, keeping well out of reach of his " terrible fore-paw. The tiger was lashing his tail from side to " side, and showing great excitement—or, as I feel inclined to put " it, *funk*—he was standing with his back to the new arrival, and " consequently, did not see him ; but as he was not more than " twenty yards distant, my friend wisely decided on beating a quiet " retreat, shortly returning, however, with some of his friends, " when they found the tiger had disappeared ; but the pack of wild " dogs feasting on a sambur fresh killed by the tiger. There was " no mistake about this, for the marks of the tiger's teeth were " distinctly visible in the throat of the deer. Ten dogs were " counted, but there might have been, and probably were, more. " This, to a certain extent, corroborates the shikarrees' statement, " that wild dogs will attack a tiger, but I still think they never " attempt to lay hold of him, for that would be nearly certain " death ; their sole object is, I imagine, to drive the tiger away. " They may, when in sufficient numbers, be able to kill a leopard, " but even this I doubt. I know, however, of two instances where " wild dogs have been seen following them. In one instance they " had tree'd the leopard, which certainly looked like mischief ; " possibly they may have chased it as dogs would a cat, for I " have heard of both tigers and leopards being fairly chased on " these hills by a pack of spaniels and such like dogs—when " parties have been out beating the woods for game—but like their

" wild brethren they generally kept at a respectful distance. If a " pack of wild dogs were to attempt to close in on a tiger to kill " him, they must leave some of their number dead on the battle " ground before they succeeded. Yet I have never heard of any " one meeting with such a sign. The tiger, like all the cat tribe, " is not naturally a bold animal, and though both he and the " leopard will not hesitate to steal on and kill the largest dog, yet " they have not the courage to fairly face a pack of the smallest " curs ; the instinct of the wild dog has taught him this, and hence, " I imagine, the cause of the scene my friend witnessed.

" Let me take this opportunity of adding a few remarks on the " courage of tigers. I have constantly heard it stated that the " tigers in Southern India and especially those on the Neilgherries, " are less courageous than the same animal in Central India. I can " understand certain animals of the same species being more savage " than others ; but I cannot understand a district, whether North, " South, East or West, producing that effect ! and here I am at " issue with "Hawkeye," who states, if I recollect aright, that the " bears in the Northern Division are more savage than those down " south. With regard to the tiger, the different manner of shoot-" ing him may have a deal to do with his apparent courage—a rat, " if badgered and bullied when driven into a corner, will turn on " one. There is a vast difference between driving out a tiger with " a line of elephants and hundreds of yelling beaters with tom-" toms, rockets and what not, and stealing on him unawares in the " deep and silent jungle, and planting a bullet in his striped hide ; " the latter is enough to terrify an animal of much greater natural " courage than a tiger. We cannot hunt the tiger in the South as " they do in Bengal, we have not the means, and our heavy forests " would not admit of it if we had ; but I think if we could stir " him up as they do, he would charge as well home here as he " does there. Remember it is generally at the elephant the charge " is made,—one of their own brute beasts, and not at the superior " animal man—that they will charge man many an unfortunate " black, and white too, has known to his cost, but as a rule it is " only when driven to it, fear making them desperate ; for I main-" tain that all tigers are cowards and sneaks, but very dangerous

"sneaks, mind you, and not to be treated with the contempt we "show to the human animal. Man-eaters are different; they have "found out their own strength and man's weakness, and yet even "after they have made this great discovery, what sneaks they are! "How seldom you hear of a shikaree with a gun being killed by "them, it is generally some unfortunate woman or laden cooly "almost invariably their victim is taken unawares. Thank good- "ness, though there are a good many tigers on these hills, we "seldom hear of a man-eater, and take my word for it, ladies and "gentlemen present or to come, the tigers here are perfectly harm- "less as far as you are concerned, *if you leave them alone.* "Should you meet one lying in the road or path-way, he will "make way for you—he may—like an ill-mannered brute that he "is, do it sulkily, giving an ugly growl, and, perhaps, showing his "long horrid yellow teeth; but he will not attempt to attack you; "he is quite as much afraid of you as you can possibly be of him; "let him get out of your way, and don't attempt to get out of his, "for like all sneaks, should he see that you are really afraid of "him, *he might just possibly take advantage of it!* There are "two circumstances under which there may be real danger: one, "coming on a very hungry tiger that has just killed an animal; "and the other, a tigress with very young cubs. But, I believe, a "bold and determined front will make even these get out of the "way. In the former case, wild dogs can do it at all events.

I am, your's faithfully,

A DEER STALKER."

The following extract from an account of a run with the Madras fox hounds, which, to avoid the deadly heat of the plains of the Carnatic during the summer, were sent to Ootacamund at the close of our last hunting season, must be well known to many of my friends; but, as it is apropos of what "*A deer stalker*" has said, I give it. It originally appeared, in full, in the *South of India Observer* of the 24th July, afterwards in *The Field* of the 24th September, page 209, and also in the *Illustrated London News* of the 9th October 1869, page 353. In the last paper, there is a spirited sketch of the strange chase, evidently taken from a still

better one, by a well known amateur on the spot, whose drawing has been admirably repeated by Messrs. Nicholas and Curths, Photographers of Madras and Ootacamund. This pack with, if I remember right, only two exceptions, "*Gracious*" and "*Purity*," were imported from England about 6 or 8 months before their exploit which, as their recorder says, speaks volumes for the blood and courage of the fox hound. Having got away from the huntsman and the field, who had to skirt a ravine, they had killed a jackal by themselves when "a fine full-grown cheetah suddenly bolted from a sholah, and away went every dog full cry at his heels. They soon came up with him, dashed at him, and rolled him over in the open. What followed, speaks volumes for the blood and courage of the fox hound.

The cheetah left his mark on some of the dogs and broke away into a small thick copse with a stream at the bottom. The dogs followed bravely, and went straight at him again till cheetah and dogs rolled one over the other into the stream below. Again the cheetah broke away, and ensconced himself in the thickest part of the nullah in the small copse abovementioned, where the dogs brought him to bay.

The horror of the master may be easily imagined when, coming up just as the cheetah was fairly roused, he found an invisible struggle going on, the furious barking of the dogs diversified by an occasional howl, as with a low deep growl the beast charged some of his boldest enemies. Every one gave up the hounds for lost, but when, after half-an-hour's violent exertion on the part of the field present the pack was at last whipped off, to the surprise and relief of all, the whole thirteen couple turned up safe, though some were wounded. The number of the assailants seems the only explanation of such an escape from a beast, one stroke of whose paw would have killed the strongest dog that ever barked. The rush, however, of over twenty hounds on different sides as soon as the cheetah turned in any one direction seems to have left him neither time nor presence of mind for a single well-aimed blow, and the few wounds inflicted were principally snaps.

Guns had meanwhile been sent for from a neighbouring Badaga village, and Mr. ——— making his way to a rock close to the

scene, put a ball through the shoulder of the cheetah." It is to be regretted, that, the writer of this spirited account has, after the custom of his brother sportsmen in India, used the word "*cheetah*" instead of "*panther*" which the animal was, not "*felis jubata.*"

No. 20, Page 27, *Felis Pardus.*

The Panther.

There is not any point more disputed among Zoologists and sportsmen than whether there are two distinct species of panther or leopard, or whether the animals they find, differing in size and color, from very nearly the weight of a tigress down to that of a bull-dog, or from the darkest shade of the witch-loved black cat down to a pale fawn marked with clusters of dark spots in rosettes are merely varieties of the same species. I am not naturalist enough to give an opinion, but as a sportsman, my impression is, that there is only one species of panther which from local or accidental causes differs in depth of color, in size, and perhaps in habits, as do all other animals: *e. g.*, I have seen a town-educated bull terrier run along a narrow ledge, only a few inches wide, connecting two windows overhanging a street and with as much confidence as would a cat or one of our Indian squirrels, survey the scene below him, all this time barking at passers-by: a feat that certainly not one in one hundred of his country friends would dream of. Again; some of the tribes or clans of Karens who inhabit the wild mountains N. E. of Shuaygheen and Tonghoo in Burmah live in villages, if they may be so termed, consisting of one immense bamboo house or barrack raised on bamboo piles very high above the ground, while the only access is through a trap-door cut in the floor of one of the passages, down this a steep and narrow bamboo ladder is lowered, forming about as *un-dog like* a path as one can well imagine. I have on two occasions seen Karen dogs descend these in the most matter-of-fact way. I argue from this that panthers brought up in forest would soon learn to avail themselves of or to haunt the branches of trees to which they could obtain access and thus get looked on as a distinct species. However many very experienced sportsmen believe that there are at least two panthers, I call them so to distinguish them from the

hunting leopard "*felis jubata:*" if there be two, I think, (vide page 33) that the difference consists more in size and shape of skull than in disposition of spots.

The following letter from an excellent naturalist, whose name I am not at liberty to give, was published in the *South of India Observer* of the 10th of April 1869 ; it gives such valuable hints to the sportsmen and naturalists to whom it is addressed that I take the liberty of re-printing it :—

"I am sorry to say that up to the present time, we have no "definite information about the larger "Spotted Cats" of India. "There seems good reason to suppose that there are two species ; "both commonly but erroneously called "Cheetah," which name "properly belongs to the *Felis Jubata*, or Hunting Leopard. "The larger of these two animals is strong enough to kill a "bullock, and the pugs might be mistaken for those of a small "tiger. The smaller one confines itself to killing goats, dogs, &c., "and has been frequently known to climb trees. It is desirable "that the specific difference (if any) between these two animals be "described ; and I shall feel obliged to any one who will answer "some or all of the following questions :—

"1st. What are the measurements of the animal known to you "as the Panther or Leopard ?

"2nd. What proportion does the length of the tail bear to the "rest of the body ?

"3rd. Is color in centre of "Rose Spots" more or less fulvous "than general ground-color ?

"4th. Are spots along dorsal line entire or "rose pattern ?"

"5th. How many vertebral joints are there to root of tail ; "and how many in tail ?

"6th. What is the color of terminal tuft of tail ?

"7th. Do you know of any other animal except the Hunting "Cheetah which is marked with round black spots, without a "lighter centre ?

"I now believe that the larger of these cats is properly the "Panther, and the smaller one, which has been known to climb "trees, the Leopard. I am anxious to get as much information on "the subject as possible : for, although making distinct species

"from what are only varieties of the same, should be carefully "guarded against, it is objectionable that two distinct species "should not be separated. Kindly address any letters on this "subject to

"LEOPARDUS NEGLECTUS,
Coonoor."

My friend "HAWKEYE," without whose notes my memoranda would never have grown into a book, in one of his letters to the *South of India Observer*, on the "Poachers of the Hills," thus writes of the panther :—

OUR POACHERS.—THE LEOPARD OR PANTHER.

"I will not attempt to distinguish the one from the other, for I "am unable to do so ; naturalists tell us that there is no difficulty "in doing so, and that the distinctions are clearly defined ; all I "can say is, that I fail to see them. As in the tigers, so with the "leopards, there is much difference in size ; and with the latter, "this, no doubt, establishes a variety. But we also often meet with "tigers so different in structure, as almost to amount to a variety, "for some are short, heavily built, of massive power and weight, "and with tail rather short and thick ; all the proportions, however, "being admirable and handsome. Others again are long, lankey, "herring-gutted, long-tailed, ill-favored brutes. The difference is "supposed to be attributable to locality ; but this will scarcely hold "good, as both have been observed ranging over the same forests "and country. With the Leopard or Panther, however, size does "admit of, not only a distinction, but a variety, though I am unable "to trace it. I shall accordingly treat them as one, so far as their "poaching propensities are concerned on these hills. They are "very numerous all over the Neilgherries and on the slopes on the "ghauts ; at Billicul I was informed that in the course of three "years, no less than nine had been trapped there. They are very "destructive to cattle, sheep, &c., and are especially partial to dogs. "A very large one was caught in a trap at Sholoor, measuring "much about the usual length of a tigress ; it was a very handsome "and powerful brute. How many more have been taken in the "same locality I am not informed, but numbers are trapped and

" shot about the villages on the hills. It would, I think, be inter-
" esting if our Commissioner would inform the public, from time to
" time, the number of skins presented for the Government reward.

" The leopard, like the tiger, is remarkably wary and difficult to
" stalk, his keenness of vision being quite equal to that of his larger
" cousin, and he is less susceptible of being observed by the sports-
" man, his color and spots so completely blending with the rocks he
" generally frequents. On one occasion, in stalking a stag, not far
" from the Avalanche, I approached a mass of rocks near the sum-
" mit of a hill, from which I disturbed a leopard, who had, I
" believe, his eye upon the same quarry that I was in pursuit of;
" it was only by his movement we detected his presence; as he
" glided away amongst the rocks like a shadow, it was impossible
" to make out his form sufficiently clear to risk a shot, and when he
" paused, which he did but once, his head only was visible, and
" that, at a couple of hundred yards was drawing it a little too fine
" for me. This animal appeared to me as heavy and large as any
" tigress. The leopard is continually found near the resorts of ibex,
" and there is little doubt that he is a successful marauder against
" those very wary creatures; the strong effluvia of the ibex greatly
" assisting him in his depredations. The large class of leopards
" also prey on the sambur, and there is no question that many,
" especially hinds and calves, fall victims to this midnight prowler.
" He has proved himself a sad scourge too, to the sportsman when
" beating sholahs for woodcock and other game, as he constantly
" gratifies his craving for dog's flesh, by carrying off, most probably,
" the best dog in the pack, and not content with this, often kills
" two or three others at the same time. He is not over-shy at night,
" for he has been known to prowl about Ooty itself, close to the
" houses, and stray pets have been taken away and no more seen.
" I lost an excellent dog some years ago, which fell a victim to one
" of these nocturnal visits of the spotted pard. In alluding to the
" variety of size of these animals, it may, perhaps, be as well to
" take them in detail, and notice the difference that has been
" observed in that respect in those met with on these hills. I have
" mentioned the large one trapped at Sholoor, and the one I saw at
" the Avalanche; taking those as the largest type, we may set them

" down as equally mischievous with the tiger, with, perhaps, the " only one exception, that they do not so generally attack the Todah " buffaloes as the tiger does, when he has an opportunity.

" The next in order and size is a short but sturdy-looking speci- " men with short tail,—a powerful animal. One shot on the crags " near Mailkoondah, a very old fellow, was of this description, and " quite distinct in appearance from a younger animal shot in the " same vicinity; then there is a light-bodied active animal, with " very long tail, often taking to trees when disturbed by dogs or " beaters, affording a very easy shot, when so situated, to the " sportsman. Another variety is the very small, stumpy, round- " bodied little cheetah, which may be said almost to inhabit the " trees in the large woods and forests, both on the mountains and " below. I shot one of this description some years ago, in the " Northern Division, and the very same evening a shikaree brought " in for the reward one of the largest leopards I have seen. I " could, in examining them, trace no perceptible difference in the " formation of the rose spots on the skin, though there was a marked " distinction in color, the small animal being of a deep rufous red " compared with the larger one. The tree-leopard is said to pay " especial attention to the monkeys; being equally nimble, he chases " them from branch to branch, or lying hidden along the stem, sud- " denly drops on his unconscious prey. In the Annamallies these " leopards are often met with, and on one occasion, on the approach " of the sportsman, one having dropped off a tree, the remains of " his prey, in the shape of a black monkey, was left hanging on a " part of the branch from which the leopard had dropped into the " underwood below. Of the hunting leopard nothing need be said " here, as he belongs entirely to the plains, and with regard to him " I have only the one observation to make, that we know exactly " how he takes his prey, viz., by his speed, though it is generally " supposed, even in his case, that he actually captures the antelope " by a spring, because in a short run he usually does so; but in " cases where a good buck has tested the cheetah's powers of speed, " he often makes a last effort to reach the deer, and then generally " strikes the animal on the hind-quarters, bringing the buck quite " round by the force of the blow, thus enabling the cheetah to seize

" his quarry by the throat. So light is this specimen of the leopard " that a buck antelope has been known to struggle on with the " cheetah on his back some yards before he fell. I once saw a " large tame leopard pitted against one of those fighting rams ; the " leopard was one of the ordinary breed that had been taken when " quite young, and had, up to the time in question, never tasted " raw flesh, yet, when loosed at the redoubtable ram, he rushed " round him, leapt on his back, ran along till he got the ram's " mouth and nose into his own mouth, and so held on ; in a few " seconds the ram would have been stifled, without doubt. I never " saw such an exhibition of instinctive ferocity ! the ram was quite " cowed and could not be persuaded to show fight at all.

" I have omitted to bring in, as a separate species, the black " leopard—purposely, I may say, for it has yet to be proved whether " they are distinct. The evidence is conflicting and it is difficult to " decide, especially as on one occasion a gentleman saw an old " leopard accompanied by two of her offspring, one red, the other " black. Did ever any one see a white leopard, barring the snow " leopard of the Himalayas ? which by the way is not white, but " yellow. If not, may we not—though it sounds paradoxical—look " upon the *black* as the *Albino* of the common leopard ? I throw " out the query hap-hazard, and leave it to others better versed in " these matters to take it up, if they like. One point has, I believe " been observed,—that these, may I call them "*Betes Noires ?*"— " are more commonly met with on the Neilgherries and in Travan- " core, than elsewhere.* This fact, if a fact, might lead to the " solution of the vexed question. My own opinion is of no value, " my observations having been very limited. One thing I may say, " and that is, that I have never seen two black leopards in company, " nor do I know of any one who has. Like the black cat of witch- " craft notoriety, the black cheetah has a fierce and repulsive look, " his light-colored eyes giving him a very devilish expression. " Talking of Travancore, reminds me of my first meeting with a " leopard in those parts ; I had gone out some ten or twelve miles " from cantonment (Quilon) for spotted-deer shooting, and the

* I am told they are numerous in the Malay Peninsula.

" morning after arrival, while prowling about the low jungle, in the " undulating ground on the border of the large forest, I saw on the " opposite rise, a fine (as we always called them in those days) " cheetah ; he was soon out of sight in the brush-wood, but the " village head-man who was with me, consoled me by saying, " We " should be sure to get him." I did not see *how*, but not to display " ignorance, avoided questioning. I had some success with deer " in the evening, and the next morning, on preparing to sally forth, " my village friend of the day before appeared, and with much " apparent respect, asked whether I wished to see the cheetah of " the previous morning ? Of course I said, in hot haste, " lead on!" " whereupon my guide replied " We have him ; for two years have " we had a trap set to catch the thief, and we could not succeed ; " but our good fortune sent you here, and behold ! in fear of your " presence, the cheetah has entered the trap, and is safe. We shall " get a reward from the Dewan, who has been threatening us if we " do not send a live cheetah to the Huzzoor for the approaching " tamasha." Very flattering, no doubt, but very disappointing ; " however, making the best of it, we went to the spot, and there " indeed was as fine a leopard as I ever saw. The trap was well " made and strong, on the plan of the bait being apparently inside " the cage, though it is actually railed off, and as the leopard rushes " in at the one open end, the action of the door falling and closing " behind him, lifts a corresponding door at the opposite end, giving " the bait—a calf or a goat—the opportunity of bolting away, which " they seldom fail to take advantage of. This description of live " trap is now a-days in general use ; formerly a trap on the figure-" of-4 principle, with heavy weights of stone piled on the board " above was often used, smashing the animal it caught as flat as a " pancake. It was in Travancore too that I reached a solitary kind " of farmstead in the then partially-cleared jungles in the valley " opposite Nagercoil, some fifteen miles or so towards the head of " the valley. We found the proprietors in some distress, and when " we came to enquire into particulars, found that a few nights " before, a leopard had sprung over and into the cattle-pen, had " killed some five or six cows, and then found himself trapped, for " after several attempts he failed to get out. It was perhaps, that " he then took his revenge by killing the other cows, but this fully

" corroborates Mr. Blyth's remarks, quoted by Jerdon, at page 99 " of his "Mammals of India," regarding the blood-sucking propen- " sity of the leopard, when he finds cattle or other animals penned " up and helplessly in his power. The leopard in question could " not escape, and was shot through a hole made in the wall of " the cattle shed.

" Leopards are more pugnacious perhaps than tigers, frequently " attacking man when provoked, where the tiger would prefer to " escape without molesting any one. About Mangalore and North " Canara, I am informed that they are generally very fierce ; a " friend there once had a narrow escape :—a leopard driven out of " a jungle, on seeing him posted, immediately charged, and spring- " ing through the air, seized the sportsman's cap in his mouth and " vanished from his sight. Then again on the other hand, I once " nearly trod on a female leopard with her cub close by, and she, " instead of attacking me, slunk away ; it was curious. I was out " on some hills about 30 miles from Bellary, and in prowling about " with a shot gun, looking for a jungle-cock I had heard crowing ; " on passing through an opening between some rocks and low " jungle, I heard what I thought was the droning or drumming noise " of the bush quail, a few paces in front of me ; I advanced quietly, " when a dog I had with me rushed ahead, and at the same moment " I caught sight of what I thought was a wild cat running through " the grass, the dog in chase. I moved on a step or two, the " droning noise still continuing, but louder, when suddenly, at my " very feet, something moved in the grass and disappeared round a " bush ; just giving me time to see that it was a large leopard ; " had I been quick I could certainly have killed her, even with " shot. It was fortunate she did not spring as I approached, for I " was completely off my guard, under the impression that the noise " I heard was that of a quail and not as it proved, the low growling " of the cheetah. That they occasionally outwit themselves, my " anecdote about the cattle-shed shows, and sometimes it happens " that they take up what I may call a false position for the day " either from being out too late, or from a wish to be near their " prey, and thus they often fall victims to their own temerity. I " remember one being killed from under as tack of paddy straw

" within a few hundred yards of the nearest house in the canton-
" ment (French Rocks); another was disturbed from the hedge
" of a compound at Coimbatore; and lately we have heard of one
" killed in the General's compound at Secunderabad. Many
" instances are known of their intrusions into houses, attracted by
" their favorite food—dogs, and some curious and interesting
" stories of such visits are extant amongst the railway employés
" on the several lines; but I have gone far enough I think, and
" will close this scrambling notice of our second poacher on the
" list, only adding, in conclusion, my wish that it be understood,
" in treating the subject of felines, and indeed of all other animals
" I have written about, I only record what I have heard or seen;
" the scientific discussion of any question raised I leave to those
" who have made such their study. The tales I have heard I tell
" as told to me, and what I have witnessed I describe to the best
" of my ability; endeavoring, as far as I can, to afford information
" and amusement to those who think my lucubrations worthy
" of perusal.

HAWKEYE."

A few lines more about the black panther. Sportsmen know that, when the light falls at favorable angles upon the skin of this animal, the rosettes or clusters of spots are very visible and do not appear to differ in arrangement from those of his paler relations. Within the last few days, September 1869, while watching a fine black cat basking in the sun, I remarked, that at particular lights the animal exhibited most plainly the regular brindled markings of the ordinary grey wild, or semi wild, cats: these markings were as black as the rest of his hair, or blacker if possible, for he is a beast which any witch or demon might delight in. His owner told me, to my great satisfaction, that the cat's mother was a half-wild grey brindle. *Query.*—As all black panthers show their clusters of spots, have all black cats some such spots or brindled shades as those I have mentioned? If so, and, as we all know, black cats are not a distinct species, are we not to suppose that the more important "*betes noires*" as friend "HAWKEYE" well terms them, are the offspring of ordinary fawn-colored parents?

No. 22, Page 34.—*Felis viverrina.*
The large Tiger-Cat.

Jerdon gives the following description of this fine tiger-cat :—

"Of a mouse grey-color, more or less deep, and sometimes tinged with tawny, with large dark spots more or less numerous, oblong on the back and neck, and in lines, more or less rounded elsewhere, and broken or coalescing ; cheeks white ; a black face stripe ; beneath dull white ; chest with five or six dark bands ; belly spotted ; tail with six or seven dark bands and a black tip ; feet unspotted ; whiskers either entirely white, or with a white tip.

Length, head and body 30 to 34 inches, and sometimes more ; tail, 10½ to 12½ ; height about 15 or 16 inches ; weight of one 17 lbs. The ears are rather small and blunt, the pupil, circular ; the fur, coarse and without any gloss ; the limbs, short and very strong. The nasal bones are somewhat attenuated, causing a narrowness of visage which has suggested the names *viverrina* and *viverriceps.* In old animals the bony orbital rings are complete.

This large tiger-cat is found throughout Bengal up to the foot of the south-eastern Himalayas extending into Burmah, China and Malayana. I have not heard of its occurrence in Central India, nor in the Carnatic, but it is tolerably common in Travancore and Ceylon, extending up the Malabar Coast as far as Mangalore. I have had one killed close to my house at Tellicherry."

No. 23, Page 35.—*Felis Bengalensis.*
Leopard-Cat.

Jerdon gives the following minute description of this very beautiful cat.

"Ground hue, varying from fulvous-grey to bright tawny yellow, occasionally pale yellowish grey or yellowish, rarely greenish-ashy, or brownish-grey ; lower parts pure white ; four longitudinal spots on the forehead, and in a line with these four lines run from the vertex to the shoulders, the outer one broader, the centre ones narrower, and these two last are continued almost, uninterruptedly to the tail ; the others pass into larger bold, irregular, unequal, longitudinal spots on the shoulders, back and sides, generally arranged in five or six distinct rows, decreasing

and becoming round on the belly ; two narrow lines run from the eye along the upper lip to a dark transverse throat band ; and two similar transverse bands run across the breast, with a row of spots between ; tail spotted above, indistinctly ringed towards the tip ; the inside of the arm has two board bands, and the soles of all the feet are dark-brown. There is generally a small white superciliary line.

Length, head and body, 24 to 26 inches ; tail, 11 or 12, and more.

From the numerous synonyms it will be seen that this is a variable species, both as to the ground-color of the animal, and the size and boldness of its markings, though all retain much the same pattern as the example here described. Mr. Blyth states that F. Javanesis differs most from the type, approximating F. viverrina in coloring. Those from Southern India appear to have both a richer ground-color, and the spots of a bolder pattern than most from the north of India ; but I have seen some from the Himalayas very similar. In some the marks have a marbled appearance ; in others they appear to be disposed more irregularly and less in rows, and in some the spots are much smaller than in typical specimens.

The leopard-cat is found throughout the hilly regions of India from the Himalayas to the extreme south and Ceylon, and in richly wooded districts, at a low elevation occasionally, or where heavy grass jungle is abundant, mixed with forest and brushwood. In the South of India it is most abundant in Coorg, Wynaad and the forest tract all along the Western Ghâts ; but is rare on the east coast and in Central India. It ascends the Himalayas to a considerable elevation, and is said by Hodgson even to occur in Thibet, and is found at the level of the sea in the Bengal Sunderbunds. It extends through Assam, Burmah, the Malayan peninsula, to the island of Java and Sumatra at all events."

I think Jerdon has however been fortunate in obtaining larger specimens than I have seen : or perhaps I may have confounded the lesser leopard-cat, *Felis Jerdoni*, with it : his description of his cat is as follows ; and I am, with him, inclined to suppose that it is only a small variety of *Felis Bengalensis.*

The Lesser Leopard-Cat.

"Very similar in its markings to the preceding species; but the size of the full-grown animal much smaller, that of F. rubiginosa; and the ground hue of the upper parts grey, untinged with fulvous.

"*Hab Peninsula of India.*—I first detected an adult male and a kitten of this species in the Museum at Madras, and find that there is an adult specimen also in the British Museum."

Nothing more is recorded of this cat, which may turn out to be only a small variety of the last.

Jerdon gives the following description of "*Felis rubiginosa*" the "*Rusty spotted cat*" which he only procured in the Carnatic, in the vicinity of Nellore and Madras. I do not remember having seen it, but, like Mr. W. Elliot and Jerdon, page 109 of the latter, have often seen, near villages, undoubted hybrids, probably between this and the domestic cat.

Jerdon never saw or heard of this cat in Central India, or on the Malabar coast, he had not many specimens, but in all the spots were rusty, and the fur much of the same hue, tinged with rufous, more or less.

Description.—"Greenish-gray, with a faint rufous tinge; beneath and inside of limbs white; a white superciliary streak, extending on the side of the nose; two dark face streaks; top of head and nape with four narrow dark brown stripes, becoming interrupted posteriorly, and passing into a series of rusty-colored spots on the back and sides, somewhat longitudinal on the back, but roundish on the sides; tail short, more rufous than the body, and uniform in color, or very indistinctly spotted, the tip not dark; the lower surface and inside of the limbs with large dark brown spots; feet rufous-gray above, black on the soles; ears small; whiskers long, white; fur short and very soft.

Length, 16 to 18 inches head and body; tail 9½.

This cat varies somewhat, it appears, both in the ground-color of the fur, and the character of the spots. Geoffroy calls the ground-color reddish-gray, and Kelaart describes it as ferruginous grayish-brown. The latter calls the spots on the body dark ferruginous-brown, almost black on the limbs."

No. 24, Page 35, *Felis torquata.*

Spotted wild cat.

There are so many shades and sizes among these cats, that it is, I think, difficult to say where the domestic ends and the true wild variety begins. Jerdon mentions hybrids between the spotted and domestic cat, yet it is strange that in writing of the wild cat of the British Isles, Buckland in his "Curiosities of Natural History" gives the following extracts from Bell's quadrupeds :—

"The assertion that the wild and domestic cat will breed together, I believe to be absolutely without foundation. The head of the wild cat is triangular, strongly marked ; the ears rather large, long, pointed, and triangular ; the body strong and rather more robust than that of the domestic cat. The tail of equal size throughout its length, or rather larger towards its extremity."

Jerdon's description of the spotted wild cat is as follows :—

"Ground color of the fur cat-gray, more or less fulvescent, or pale grayish-fulvous, with numerous small black roundish spots ; on the head, nape and shoulders, the spots are smaller, and tend to form longitudinal lines on the occiput and nape ; some distinct cross bands on the limbs, with one or two black streaks within the arm ; cheek striped as usual ; the breast spotted, but the belly almost free from spots, tail short, with a well defined series of dark rings and a black tip, ears externally dull rufous, with a very small dusky pencil-tuft ; cheek stripes as usual ; paws blackish underneath.

Length, head and body about 16 to 18 inches ; tail 10 to 11.

The fur is more or less dense, and the markings are much brighter and more distinct in some than in others, but never so much so, that I have seen, as in the figure in Hardwicke's illustrations. Specimens from the salt range of the Punjab and Hazara, whence sent by Captain Hutton, vary somewhat, and were at one time considered distinct by Blyth. The markings in this variety often form somewhat large transverse ill-defined stripes on the sides and limbs.

Length 2 feet ; tail 1."

He procured it at Hissar, where it is common ; at Mhow, far from rare ; also at Saugor, and near Nagpore, rarely ; but it does not appear to extend into the Gangetic valley, and is rare south of the Nerbudda.

No. 25, Page 35.—*Felis Chaus.*

The Common Jungle Cat.

Jerdon describes this powerful and savage animal as follows :—

"Yellowish-gray, more or less dark and unspotted, approaching to rufous on the sides of the neck and abdomen, where it unites with the white lower parts ; a dark stripe from the eyes to the muzzle ; ears slightly tufted, rufous black externally, white internally ; limbs with two or three dark stripes internally, occasionally faintly marked externally also ; tail short, more or less annulated with black, most conspicuously in the young.

Length, head and body, 26 inches ; tail 9 to 10 ; height at shoulder 14 to 15.

A drawing of this species, in Buchanan Hamilton's collection, has the marks on the limbs very conspicuous externally, and also those on the belly, and the face very rufous ; whilst some from Sindh and the Punjab Salt range, (F. jacquemontii) have no black markings on the limbs, and there are two or three faint blackish rings at the end of the tail.

This is the common wild cat over all India, from Himalayas to Cape Comorin, and from the level of the sea to 7,000 or 8,000 feet of elevation. It frequents alike jungles and the open country, and is very partial to long grass and reeds, sugar-cane fields, corn-fields, &c."

I have more than once remarked the jackal-like height of this cat. In his Appendix, Jerdon indirectly corroborates this by the following dimensions which he gives of a fine chaus, killed at Amballa ; viz., total length 39 inches, height 18 inches, weight 18 lbs.

No. 26, Page 37.—*Felis Caracal.*

The Red Lynx.

Jerdon thus describes this animal :—

"General color unspotted vinous brown or bright fulvous brown, paler beneath, almost white in many ; tail concolorous with the

body, tapering, with the tip black ; lower parts with some obscure spots, at times distinct, on the belly, flanks and inside of limbs ; ears black externally, white within, a long dark ear-tuft ; a black spot where the moustaches grow, and another above the eye, also a line down each side of the nose.

Length 26 to 30 inches ; tail 9 or 10 ; ear 3 ; height 16 to 18 inches.

This handsome animal is found, though rarely, in many parts of India. I have had it from the Northern Circars on the east coast ; from the Neermul jungles between Hyderabad and Nagpore ; and from the Vindhian range of hills near Mhow. It was sent to Mr. Blyth from Jeypore. It appears to be more abundant perhaps in the west of India, in Kandeish, Gujerat and Cutch ; and the Guicowar is said to keep a pack of trained lynxes with which he hunts peafowl, hares, &c. It appears to be quite unknown in the Himalayas and in Bengal, and the countries to the eastward."

No. 29, Page 44.—*Viverra Zibetha.*

The large Civet-Cat.

Jerdon thus describes the large Civet-cat :—

" More or less yellow-gray, or hoary-gray, with black spots and stripes ; throat white, with a broad transverse band ; another on the side of the neck on each side, showing four alternating black and white bands ; beneath hoary white ; tail with six black rings ; limbs nearly black or sooty brown. In some the body is nearly immaculate ; in others, marked with numerous dark wavy bands ; mane distinct.

Length, head and body 33 to 36 inches ; tail 13 to 20 (with the hair.)

This large civet-cat inhabits Bengal, extending northwards into Nepal and Sikim, and into Cuttack, Orissa and Central India on the south ; but replaced on the Malabar Coast by the next species. It also extends into Assam, Burmah, Southern China and parts of Malayana. It is perhaps the large variety of V. *rasse*, indicated by Sykes as found in the country east of the Ghats ; 28 inches long, with more ferruginous in its tint, and the black lines on the neck more marked. It is said to frequent brushwood and grass ;

also the dense thorny scrub that usually covers the bunds of tanks."

He says that the civet-cat takes readily to water if hard pressed: I have heard sportsmen from the western coasts speak of an animal called by the natives there a "*water cat*," may it not be his next mentioned species the *Malabar civet-cat*, which is, the size, or nearly so, of this one, from which it chiefly differs in the more pronounced character of the dark marks and in the purer gray of the ground color?

No. 30, Page 44.—*Paradoxurus Musanga.*
The Tree or Toddy Cat.

Jerdon says that this animal is "popularly called the Toddy-cat, in consequence of its supposed fondness for the juice of the palm (Tari, H., toddy anglice), a fact, which appears of general acceptation both in India and Ceylon (where it is called the palm cat) and which appears to have some foundation.

His description is as follows:—

"General color brownish-black, with some dingy yellowish stripes on each side, more or less distinct, and sometimes not noticeable; a white spot above and below each eye, and the forehead with a whitish band in some; a black line from the top of the head down the centre of the nose is generally observable. In many individuals the ground color appears to be fulvous with black pencilling, or mixed fulvous and black; the longitudinal stripes then show dark; limbs always dark brown. Some appear almost black throughout, and the young are said to be nearly all black. Some appear fulvous-gray washed with black, the face black, and the tail very dark; and others appear to have the sides spotted. Many of these variations are owing to the state of abrasion of the fur, which is yellowish at the base and blackish at the tip. One is described as pale grayish-brown with longer black hairs intermixed, and most prevalent on the back of head, neck and along the back; three black bands on the loins; head brownish with a gray mark above and below the eyes; tail with the terminal fifth yellowish white. I have had several skins with the terminal portion of the tail yellowish white, and one or two with the whole posterior parts

of the same hue. Some have the abdomen marked with elongated white spots, and individuals occur with the tail spirally twisted, so that the extremity has the lower surface uppermost; and according to Blyth, it was an individual similar to this on which the genus was founded, and the name *Paradoxurus* bestowed, which has been translated into *screw-tail*.

Length, head and body, 22 to 25 inches; tail 19½ to 21; hind foot $3\frac{1}{10}$; weight 8½ lbs.

This tree-cat is a common and abundant animal throughout the greater part of India and Ceylon, extending through Burmah and the Malayan peninsula to the islands. It is most abundant in the better wooded regions, and is rarely met with in the bare portions of the Deccan, Central India, and the North-west Provinces. It is very abundant in the Carnatic and Malabar Coast."

Although Jerdon says that the toddy-cat is rarely met with in the bare portions of the Deccan and Central India there must be some exceptions to this, for it is exceedingly abundant in the military cantonment of Kamptee, living about the thatched roofs of the houses and out-buildings, stacks of hay, &c., but as it is entirely a nocturnal animal, it is not often seen. If they steal a fowl now and then, the theft is well atoned for by the number of rats they destroy. One killed near my house measured, head and body 24½, and tail 20½ inches.

No. 31, Page 44.—*Paradoxurus Grayi.*

The Hill Tree Cat.

Jerdon thus describes this animal:—

"Color above light unspotted fulvous-brown, showing in certain lights a strong cinereous tinge, owing to the black tips of many of the hairs; beneath lighter and more cinereous; limbs ash-colored, deeper in intensity towards the feet which are black; tail of the same color as the body, the end dark, white tipped; ears rounded, hairy, black; face black, except the forehead, a longitudinal streak down the middle of the nose, and a short oblique band under each eye, gray or whitish.

Length, head and body, 30 inches; tail 20."

He says it inhabits the South-east Himalayas only, extending into Assam and Northern Burmah, and that Hodson states that

it is common in the central region of Nepal, keeping to the forests and mountains. I fancy, vide page 44, it is to be found in Goomsoor having probably followed the course of the Orissa highlands.

No. 32, Page 45.—*Arctictis binturong.*
The Bear-Cat-Binturong.

Jerdon thus describes this extraordinary animal, which, following Blyths' example, he places after *Parodoxurus.* He mentions that it was classed by Cuvier among the *Ursinae*, and that it may be considered a sort of link between the plantigrade and digitigrade carnivora with some distinct analogies to the *Lemurs.*

Description.—" General color throughout deep black, with a white border to the ears, and a few brown hairs scattered over the head above, and on the anterior surface of the fore-legs ; hairs long, rigid and diverging ; tail* monstrously thick at the base, tapering to a point, with bristling straggling hairs, exceeding those of the body in length.

Length, head and body, 28 to 33 inches ; tail 26 to 27."

The only binturong I have seen reminded me more of a gigantic lemur than any other animal, but my ideas are only those of an unscientific sportsman not of a naturalist.

Herpestidinae.—Mungooses.

Jerdon's next group of animals are the mungooses, *Herpestidinae.* I did not mention them thinking they were too well known for any account I could give to interest sportsmen, and I could not furnish any information regarding their combats with snakes. I have lately been told that the stomach of a large one, killed near Secunderabad, contained a quail, a portion of a custard-apple, a small wasp's nest, a blood-sucker and a number of insects. This was probably the common Madras or Southern India mungoos "*herpestes griseus.*" At page 137, No. 133, of his Mammals, Jerdon mentions a very fine mungoos, nearly double the weight of the ordinary one, which is not however so well known to many sportsmen. He terms it " Herpestes vitticollis, the stripe-necked mungoos," and gives the following description of it :—

* Prehensile or partially so.—VAGRANT.

"Of a grizzled gray color more or less tingedwith rusty reddish, especially on the hinder part of the body and tail; a dark stripe from the ear to the shoulder: tail rufous black at the tip.

Length of one killed on the Neilgherries, the head and body 21 inches; tail with the hair 15; weight 6 lbs. 10 oz." He says also that this fine species of mungoos is found throughout all the forests of the Western Ghats, from near Dharwar to Cape Comorin. It is rare in the northern parts, and most abundant in Travancore; that he killed it on the Neilgherries, in Wynaad, and saw specimens from various parts of Malabar, and, that, from its large size this must be a very destructive animal to game and the smaller quadrupeds.

It is the large mungoos often seen on the Neilgherries and, as far as my experience goes, is abroad at all hours of the day. Lately when looking for deer on the Kondahs I was much interested in watching, through my glass, a couple of these animals working along an opposite hill side just as clever terriers would have done. They were evidently drawing on a scent which they followed to earth and then began to burrow most keenly. Suddenly without any visible cause they set off at full speed coursing against each other in pursuit of something; probably a hare which, disturbed by the unwelcome intruders, had bolted from some other entrance to the burrow, (vide pages 69 and 81) Indian hares often go to ground.

No. 33, Page 45.—*Canis pallipes.*
The Indian Wolf.

I can only add to the following description by Jerdon—my conviction that wolves vary much in color and apparent size with season and locality. In their winter clothing of the cold season they are rather fine-looking and heavy animals: at the end of the hot months and at the commencement of the rains they become, from the absence of the longer hair, mangy and miserable-looking. The same may be said of jackals; perhaps the females of both, like some dogs, lose their hair after breeding. My impression is that, I have generally found young jackals at the end of the hot season, or beginning of the rains. If this be correct, wolves probably breed at the same time, as do many of the birds and beasts in India.

Description.—" Hoary fulvous or dirty reddish-white, some of the hairs tipped black, which gives it a grizzled appearance ; somewhat reddish on the face and limbs, the latter paler than the body : lower parts dingy-white ; tail thinly bushy, slightly black tipped. Ears rather small.

Length of one, head and body, 37 inches ; tail 17 ; height at the shoulder 26 inches.

Elliot and Horsfield have stated that they did not consider the Indian wolf specifically distinct from the European wolf, but Blyth gives it as his opinion that it is so. " The Society's Museum now contains good and characteristic examples of the skulls of the European, Indian and Tibetan wolves, *C. lupus, pallipes* and *lainger* and the specific distinctness appears to be well marked. The European is the largest of the three, with proportionally much larger and more powerful teeth, and the orbital process of the frontal bone is much less developed than in the others. The Indian and Tibetan wolves are more affined to each other than either is to the European one."

This wolf is found throughout the whole of India, rare in wooded districts, and most abundant in open country."

No. 35, Page 51.—*Cuon Rutilans.*
The Wild Dog.

I have already at pages 52 and 53, given Mr. Hodgson and Jerdon's descriptions of this animal. Since those notes were written, my friend Hawkeye, in the following admirable letter to the *South of India Observer*, published 7th of January 1869, thus tells us more of the habits of wild dogs than many other sportmen know.

OUR POACHERS.—THE WILD DOG.

" We now come to the last on my list of poachers, and as " beforesaid, not the least by any means, for truly the wild dog is " not only a most formidable depredator, but decidedly the most " destructive of all others to game of every description. As a dog " he is remarkably handsome, and as fine a specimen of the canine

"species as any one would wish to see,—strength and speed com-
"bined with endurance, renders him to the deer tribe a per-
"secuting foe, difficult to escape from; and of whom they
"(especially the 'sambur) have the uttermost dread, fleeing from
"him, or more properly *them*—for they seldom hunt singly—with
"the greatest fear, exerting in every possible way, their instinct
"and ingenuity to escape the fangs of their fearful foe. In former
"days, these wild dogs were often met with in really formidable
"numbers, packs of eighteen and twenty having been repeatedly
"seen, and I remember long ago a very large pack, headed by
"two dogs apparently much larger than the others, being seen
"sweeping across the hill at the end of the lake, where Colonel
"Woods' house now stands, evidently in pursuit of game, which
"at that time often harboured in the sholahs, affording ample
"cover in the vicinity of the Toda Mund, near Sylk's Hotel, and
"at the back of the Club, before Woodside House was built.
"People in those days were alarmed at meeting these dogs, under
"the idea that they were somewhat akin to the wolves of Siberia,
"and would not scruple to attack and devour unarmed men.
"Certainly they exhibited little or no fear of man; but sportsmen
"hesitated to shoot at them when in packs under the above
"impression—that they were liable to attack, and when once their
"firearms were discharged, they would be at the mercy of the
"rest, and probably "sup sorrow." Generally speaking, however,
"the wild dog has not been known to be the aggressor against
"mankind, and though not displaying much dread of man, has
"hitherto refrained from actual attack, for I have never heard of
"any case proving it otherwise; at the same time, it is well
"known and an established fact that the tiger and leopard are
"often driven away by these dogs. It is uncertain whether they
"really attack with intent to kill either the one or the other, but
"that they have been repeatedly seen following both, there is no
"question. The wild dog in appearance bears much similitude in
"color and figure to the English fox; he is, however, larger, and
"stands some inches higher, and has no white tip to his tail
"which, with his muzzle, is perfectly black. The muscular
"development all over the body is extraordinary; one that I

" shot, when skinned was a most perfect specimen of thews and " sinews I ever beheld. The wild dog met with on these Hills " now-a-days is shy, and does not often afford a chance to the " sportsman to drill a hole through his skin, though I would " strongly recommend his destruction whenever opportunity offers, " for of all poachers, he is indeed the most arrant. Their mode of " taking their game has been observed on several occasions, and " from what I have been told, and have myself noticed, may be " described as follows : Ever on the move and prowling about the " woods and ravines, where the sambur are usually to be found, " they start their game ; their first object being to drive it away " from the sholahs, in rushing through which the deer have " the advantage, as the pack cannot act in concert, are easily " unsighted, and unable to press the deer to full speed ; but once " in the open, they then exert their wonderful powers of speed, " perseverance and endurance, driving the sambur headlong down " the steeps over the hills, and generally forcing the animal to " take soil (*i. e.*, resort to the nearest stream,) where they fall an " easy prey ; unless a deep pool is available, in which the deer is " often able to keep the pack at bay. A brother sportsman not " long ago witnessed a chase, where a stag managed to escape " from a small pack of five wild dogs. When they first appeared " they were observed spread out like a fan and pressing the stag " at his best pace. It may, I think, be assumed that this disposi-" tion of the pack is a matter of instinct, so that in case the deer is " forced to turn to either flank during the flight, the outer dogs " would have the opportunity for a rush to seize him. On the " occasion in question, the stag kept on straight, and the ground " being very precipitous and intersected with sholahs he contrived " to elude his fierce and hungry enemies. He was observed, on " reaching a slab of rock, to double back down its precipitous side " into the sholah beneath ; this was the first check to the pack, " who craned over the spot, and seemed to be bewildered for a " time ; however, taking up the scent and apparently assured that " the deer was below, they too got down after their prey. Mean-" while the deer getting clear of the wood, obtained a good start ; " only three dogs came out of the sholah and renewed the chase ;

" another wood favored the stag, and on his reappearance two of " the dogs alone followed at a long interval, so it is to be hoped " the stag escaped.* At another time, a gentleman saw a pack in " chase of a sambur close to him, and noticed that the dogs, in " their rushes at the deer, attempted to seize the animal at the " flank; and we can well understand how easily, with their " peculiarly sharp fangs, they are enabled to tear through the flesh " and skin, causing the entrails to protrude, and thus soon despatch " their victim. On this occasion, after pulling down the deer, two, " if not three, of the pack paid forfeit with their lives, from the " rifle of the looker-on.

" Usually these dogs are only seen at dawn or dusk. I have " only fallen in with them occasionally; once near the Pykara " waterfalls some years ago, on reaching the crest of a very abrupt " slope down by the river, I saw a hind cross within shot, alarmed, " but not by me, her gaze being directed below. As she reached " the sholah close by, I observed a movement down by the river " bank; at the same time the piercing whistling kind of cry, " which young sambur make, reached my ears, and then my " shikaree as well as myself, saw a number of red animals rush " hither and thither in great excitement. We hastened down, " guided by the mournful cry of the calf, which ceased as we " approached. A hurried shot scattered the pack of dogs, and " with the second barrel I broke the leg of one, but he escaped. " There were about a dozen in all, and they took refuge in a wood " at the water's edge. We searched for the calf, but failed to find " a vestige of it, and I know not whether it was killed and eaten " before I dispersed its enemies or eventually escaped. In the low " country, where cover game is plentiful, the wild dogs abound. " When at Bandipore, on the road to Mysore, some ten or twelve " years ago, at a time that spotted deer were very numerous in " those jungles, we constantly saw wild dogs in pursuit of the " game, and a deer I had hit they half demolished for me. A like " occurrence happened to me with an antelope, when a wolf joined " in the chase with two of my dogs, and pulled down the deer, " which he had nearly half-devoured before I reached the spot.

* This is the case mentioned at page 53.—VAGRANT.

"When at the Avalanche a few months back, I was one morning "panting up that terribly steep hill behind the bungalow, I met a "hind and fawn bustling down the side of the hill in a desperate "hurry, with all their hair standing on end; and yet, as I was to "leeward and there being nothing to alarm them that I could see, "I was puzzled at their behaviour; but the cause was not far off, "for on reaching the point from which they had come, I met three "wild dogs in chase, and I am sorry to add, made a disgraceful "miss at the biggest of the lot. At the same place one morning, "a fellow-sportsman, in wandering over the range of low hills "along the course of the river, came upon a track of where a deer "had passed at speed down towards the water, and further on "descried a wild dog on the bank which, on being fired at, made "tracks, followed by three or four others.* On going down there "was a hind in a shallow of the stream, her belly torn open, and a "calf near its birth, half-eaten, and a portion of the old hind also "devoured. The deer was scarcely cold; she had apparently been "unable to reach the deep pool a little further down stream, where "she might have held her enemies at bay. The state of the "animal, with her flanks all torn, confirms the idea that the "attacks of the dogs are confined to that part of the body, which "is so vulnerable, the skin being so much more easily torn when "the animal is at speed than when not in motion. This is "exemplified by the ease with which the spear-blade enters a hog "when running away from you, and the difficulty, (unless very "sharp) when the animal is down. In the former case it is "described as like "putting a hot knife into a pat of butter." The "wild dog is not over-particular as to his food being venison. He "takes kindly, as we know to our cost, to kid or goat, and like his "distant relation, the fox of Europe, would not, I dare say, object "to rob the roost,—thinking, perhaps as the sick Reynard in "Æsop's fables did, that "a chicken too might do him good."†

* Within a few hundred yards of this spot I found the remains of another fine samber pulled down by these pests.—VAGRANT.

† A live fowl was the greatest treat I could give Evangeline who disposed of it, feathers included, with incredible rapidity, leaving nothing but feet and beak. She was so eager on these occasions that she even neglected to try to bite her feeder, an attention she always offered at every other meal.—VAGRANT.

"Generally, however, he is too shy to approach inhabited build- "ings. VAGRANT has written some interesting particulars about "his "Evangeline." I saw the beast at the People's Park, and a "more untameable wretch I never met with, and why so fair a "name for such a savage deil, I know not.*

"The wild dog does not throw his tongue when in chase. I "have heard them make a tremulous kind of whimper, but "whether it was a call or not I could not say; they at times bark "and howl at night, and I heard one not very long ago at Ooty. "I am doubtful whether the wild dog does much harm to the "jungle sheep. The little animal so seldom takes the open for any "distance that I question his meeting with success in the chase of "this active little deer. It is a generally accepted opinion, that "where the wild dog hunts for any length of time, the deer quit "that part of the country, completely driven away by them; at "any rate, vast tracts of the most likely ground, with everything "to attract deer and to which they have been known to be partial, "have been found deserted, not for a short time only, but for "months, and even years. We know that antelope can be driven "away from favorite localities by the too frequent use of the "hunting cheetah. May it not be so too with the sambur and the "wild dogs' incessent depredations? The tiger does not cause it, "for where deer resort, there will the tiger be some time or "another. I remember once hearing a shikaree, on being ques- "tioned how it happened, there were so many deer in a jungle "from which a tiger had been moved, naively reply, "where there "are rats you generally find the cat."

"The wild dog has, I believe, hitherto been found to be quite "untameable. It is strange how certain varieties of the canine "species decline,—if I may so put it,—domestication. I have "never heard of a tame wolf, hyæna,† or wild-dog; yet the fox "and the jackal become quite tame and domestic, running about "the house and following their master just like a dog, though not "displaying any great affection or fidelity to the hand that feeds

* She is mentioned at page 53.—Vagrant.

† I have known three, if not four, cases of hyænas becoming perfectly tame, vide page 42. There was a very gentle specimen in 1868 in the Laul Bagh Gardens at Bangalore.—VAGRANT.

" them. I have seen the wild dog somewhat bold and saucy in his " demeanour. On one occasion, when returning to the Avalanche " bungalow, I heard the strange whimpering noise I have alluded " to above, and presently saw some five or six wild dogs on the " outskirts of a wood. One of them came forward to reconnoitre, " and I took a shot at him and missed ; he ran off a short distance, " and his companions entered the wood. The bold dog I had fired " at only retreated a short distance and then rushed back, tail erect " and barking furiously. Another shot failed to frighten him, but " a third throwing the dirt up into his face, he then began to think " it dangerous and decamped, barking for some time after he dis-" appeared. They were all long shots, except the first. I suppose " he was some old patriarch of the pack, and considered it his duty " to cover the retreat of his family. He looked very handsome in " his angry mood, with his black brush cocked over his back as " much as to say " who's afraid ?" These dogs are seldom met " singly ; generally they are in packs, though now and then pairs " are seen, perhaps only at certain seasons. Their hunting no " doubt, is invariably in numbers, it being improbable that a single " dog or even a pair of them could tackle the larger game. There " is, however, one point on which we may rest assured, and that is, " take him in whatever light you will, he is beyond all doubt, a " most destructive poacher, and the game he destroys is absolutely " beyond computation. My parting advice, therefore, to all sports-" men is, kill him whenever you have the chance.

" A few words in closing the rambling sketches of the " "Poachers" infesting our Hills may not be unseasonable. It is " contemplated to introduce " an Act" for the better preservation of " the game on the plateau of the Neilgherries. There can be no " doubt that such a law is really needed, and when once in force, " remember, all good sportsmen, that it depends on yourselves " whether it shall be a *dead* or a *living* law ; for unless you " heartily support it and check the slaughtering system that " hitherto has so grievously prevailed (with very few exceptions) " amongst you all, it will do but little good. Respect the close " months ; keep your eyes on the native shikarries ; restrain your " own men from shooting at all, reward them for watching your

"interests, and so assist the Commissioner to the best of your "power ; and ere long we shall soon be able to hold up our small "but *elevated* principality as a model, in this and many other "respects, to all India ; and the sportsman's heart will rejoice to "know that *slaughter* and *butchery* are no more ! ! ! "*Vale !*"

"HAWKEYE."

NOTE.—In the new "Act" a reward for the wild dog, say rupees five, might be offered with advantage.

I remember a somewhat similar case to the one last mentioned by HAWKEYE. During a beat for large game, a fine wild dog evidently tried to protect the rest of the pack which, with some fat little whelps among them, passed me at their utmost speed. Instead of following them, this dog turned off at a right angle and ran down the line of sportsmen. He was apparently very angry and, as HAWKEYE says, looked very handsome, waving about his fine black brush and growling or rather snarling loudly at each man he passed. I forget whether any of us fired at him, but he managed to get off himself and gained his object as far as I was concerned, for I should have tried to secure one of the cubs had he not succeeded in taking up my attention.

No. 36, Page 55.—*Vulpes Bengalensis.*

The Indian Fox.

My remark that foxes found on black cotton soil will not give so good runs as those from red earth whereon food is not so easily procured has been corroborated by experience at Kamptee where the ground is with very few exceptions black and the foxes, although large and handsome, are run into with ordinary dogs more quickly than at any other station I have been quartered in. They are so harmless and beautiful that it is a sin to kill them : but the wonderful grace and dexterity they bring into play in doubling before and baffling dogs have always been to me so interesting that fox coursing with a brace of greyhounds has been a temptation ; I have never tried to resist.

Jerdon's descriptions of the common and the "*Desert Fox,* Vulpes leucopus." No. 139 of his book, are as follows :—

The Indian Fox.

"Reddish-grey, rufous on the legs and muzzle, reddish-white

beneath ; ears long, dark-brown externally ; tail long, bushy with a broad black tip ; muzzle very acute ; chin and throat whitish.

Length, head and body, 21 to 22 inches ; tail 12 to 14 inches ; weight of a male about 7 lbs.

This pretty little fox varies a good deal in the shades of color in different localities, and according to season. The fur just after it has assumed its winter coat is very beautiful, a purer gray on the body contrasting with the rufous limbs. The legs are remarkably slender ; the tail is very bushy.

This fox is found throughout India, rare in the forest countries, very abundant in open country. At night it often comes into cantonments and gardens, but does not appear to molest poultry in general. Mr. Elliot says : "Its principal food is rats, land crabs, grasshoppers, beetles, &c., &c. On one occasion a half-devoured mango was found in the stomach.

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The next species, though so similar in general appearance to the last, that it is often confounded with it by sportsmen, is placed by Blyth in restricted *Vulpes.*

No. 139.—*Vulpes Leucopus. Blyth, Cat*—135.
The Desert Fox.

Light fulvous on the face, middle of back and upper part of tail ; cheeks, sides of neck and body, inner side and most of the forepart of limbs white ; shoulder and haunch, and outside of the limbs nearly to the middle joint, mixed black and white ; tail darker at the *base* above, largely tipped with white ; lower parts nigrescent ; ears black posteriorly ; fur soft and fine as in *V. montanus,* altogether dissimilar from that of *V. bengalensis.* The skull with the muzzle distinctly narrower, and the lower jaw weaker.

One I killed at Hissar had the upper parts fulvous, the hair black tipped ; sides paler ; whole lower parts from the chin including the inside of the arm and thigh, blackish ; feet white on the inner side and anteriorly, with a blackish border on the anterior limbs ; legs fuvous externally ; all feet white ; tail always with a white tip.

Length, head and body, 20 inches ; tail to tip 14 ; weight 5½lbs.

The desert fox inhabits the north-west of India, from Cutch on the south to Ferozepore, Umballa, and several parts of the Punjaub. It is said to be the only fox in Cutch and some of the Rajpootana States ; and where it does encroach on the grounds of the common fox, it is always true to the kind of ground it chiefly haunts. At Umballa, for instance, this desert fox is only found on the sandy downs of the rivers about that station, the common fox occurring in the fields around.

This fox appears to be more carnivorous than the last, and lives a great deal on the *Jerboa rat* (*gerbillus*), so exceedingly common among the sand-hills and sandy plains. It is, I think, more speedy than the common Indian fox, and gives a capital run sometimes even with English dogs ; when the fur is in good condition it is very handsome."

No. 38, Page 59.—*Large Squirrels.*

Jerdon mentions five species of large squirrels, which must be known to Madras sportsmen, who have perhaps not been able to separate them ; he calles the first the ***Malabar squirrel*** and gives the following description of it.

"Ears, nape, back of neck, the back and sides of the body, bright maroon chesnut ; the posterior part of the back, rump, and upper portion of all the limbs, and the tail, black ; forehead and interocular regions brownish ; muzzle and cheeks rufous ; neck, breast, and lower parts dingy-yellow ; feet rufous in front, yellow internally ; ears small, rounded ; very hairy.

Length, head and body, 16 to 18 inches ; tail with the hair, 20 to 21.

This race inhabits the southern portions of Malabar, the Wynaad, slopes of the Neilgherries, Travancore, &c., &c."

His next—

Sciurus maximus the *Central Indian red squirrel* is thus described :—

"Similar to the last, but there is never any black on the croup or thighs, and less on the fore limbs ; the tail more or less black or

deep maroon above, usually with a pale yellowish tip; the under parts are more or less deeply colored.

About the same size as the last. This race inhabits Central India, whence often brought alive to Calcutta. I have seen it in the forest at the foot of the Puchmurri hills, near Seonee, and in the vast jungles of Bustar, where it is very abundant; also in Goomsoor."

He then describes the *Bombay red squirrel, Sciurus Elphinstonei*, as follows:—

"Ears and whole upper surface of the body, and halfway down the tail, outside the hind-legs, and halfway down the fore-legs outside, of an uniform rich reddish chesnut; the whole under surface of the body from the chin to the vent, inside of the limbs and lower part of the fore-legs, crown of head, cheeks and posterior half of the tail, of a fine reddish-white, the two colors being separated by a defined line, and not merging into each other; feet light-red; forehead and nose reddish-brown, with some white hairs intermixed. Ears tufted.

Length of one, head and body 20 inches; tail 18.

The Bombay red squirrel is found in the northern portion of the Western Ghâts, extending into North Malabar.

It is probably the species found on the Mahableshwar Hills. Mr. Elliot records *S. maximus* as being the species of the forests of the Southern Mahratta Country, but alludes to this as a variety found in the Ghâts.

No. 151 of Jerdon is the *Black Hill squirrel, Sciurus Macruroides,* well known in Burmah, but which he seems to think he may have observed in a wood near Kotagherry on the Neilgherries.

Description.—"Uniform dark blackish-brown or black above, beneath and round the lower part of the limbs fulvous white; posterior limbs wholly black externally, and the anterior ones black behind, and more or less so externally; a black cheek-band; cheeks fulvous-grey with a large triangular patch; a rusty-red spot between the ears, which are sometimes pretty densely tufted.

Length, head and body 15 inches; tail with the hair 16.

The fur is more glossy and less wavy than in *S. macrourus.* The pelage is sometimes blanched and rusty on the back towards the rump ; and, in the young, it is said to be always thin and pale on the croup.

I have here, with Hodgson, considered the South-east Himalayan squirrel with its well-clad ears, as distinct from the Malayan race, which has the ear-couch almost nude. It is found in the South-east Himalayas, Nepaul and Sikim, also in the hill regions of Assam and Burmah."

No. 39, Page 60.—*Sciurus Ferrugineus ?*
Burmah Red Squirrel.

Jerdon does not describe this squirrel, nor have I notes to enable me to do so—it is however most richly colored and very handsome ; deep fox-red with a black tip to a large brush, and considerably larger than, perhaps double the size of, the next species.

No. 40, Page 60.—*Sciurus Palmarum.*
The Common Striped Squirrel.

Any description of this well known squirrel would be unnecessary were it not, that there are many varieties of striped squirrels, so similar to each other that the subject is interesting.

Jerdon writes of it as follows :—

Description.—" Above dusky greenish-grey with three yellowish-white stripes along the whole length of the back, and two fainter lines on each side ; beneath whitish ; tail with the hairs variegated with red and black ; ears rounded.

Length about 13 to 14 inches, of which the tail is nearly half.

This well known little squirrel is common throughout the whole Peninsula of India, except in some parts of Malabar and the North-eastern part of Bengal. It does not occur out of India, nor in Ceylon."

This familiar little pest is accused, but I believe unjustly, of robbing nests ; were he guilty of this, it would in the breeding season cause much excitement among the small birds in whose society he lives on terms of the most perfect friendship.

Be he guilty or not however, the following extract from Dr. John

Fryer's account of Bombain and India, regarding those interesting little birds, *ploceus baya*, the common weaver bird is worthy of preservation.

"In the meanwhile Nature affords us a pleasant Spectacle for this Season, as well as Matter for Admiration; whereby I know not why we should deny Reason wholly to Animals: unless it be, Man having so much, they seem comparatively to have none. For here is a Bird (having its name from the Tree it chuses for its Sanctuary, the Toddy Tree) that is not only exquisitely curious in the artificial Composure of its Nest with Hay, but furnished with Devices and Stratagems to secure itself and young ones from its deadly Enemy the Squirrel: as likewise from the Injury of the Weather; which being unable to oppose, it eludes with this Artifice, Contrives the Nest like a Steeple-hive, with winding Meanders; before which hangs a Penthouse for the Rain to pass, tying it by so slender a Thread to the Bough of the Tree that the Squirrel dare not venture his Body, though his Mouth water at the Eggs and Prey within, yet it is strong enough to bear the hanging habitation of the Ingenious Contriver, free from all the Assaults of its Antagonist, and all the Accidents of Gusts and Storms: Hundreds of these Pendulous Nests may be seen on these Trees.

Here is another Tree called Brabb,* bodied like a Cocoe, but the Leaves grow round like a Peacock's Tail set upright, of the same substance with the Cocoe, only varying in figure; the Fruit of this is less than the Cocoe, and filled with Gelly; the Wine from this is preferred new, before the other, there is a Tuft at top cut off and boil'd eats like Colliflowers: on which Tree these Birds build also."

This honest gentleman was one of our earliest Indian voyagers, and was a most close and minute observer of natural history albeit, after the liberal fashion of the sailors of those good old days, his time must have been pretty fully occupied in the more exciting pursuits of merchandise and piracy on the high seas combined with bucaneering raids on shore whenever opportunity offered.

Jerdon's next description is of *Sciurus tristriatus, the jungle*

* Brabb is a seaman's term for the Palmyra Palm, whence derived I know not.—V.

striped-squirrel—a pair of which he says frequented his house at Tellicherry :—

"Very similar to the last, but generally darker, the face, forehead, back and haunches, more or less tinged with rusty-red, or reddish brown ; the stripes small, narrower than in the common one, and not extending the whole length of the back ; tail beneath, distinctly rusty ; sides darker than in *palmarum*.

Length, head and body, 7½ inches ; tail 7½.

Mr. Blyth says he observed no difference in size. I have always found this species slightly larger and conspicuously heavier than *palmarum* :

"This species is so exceedingly similar to the last that many would only look on it as a slight variety, but it differs very remarkably in its voice, which is much less shrill, and indeed quite different in character.

With reference to the very great similarity of these two squirrels, Mr. Blyth well remarks, "the slight differences of form and color between these two species so distinct in their voice and habits, should indicate the extreme caution necessary ere we conclude other allied races to be merely varieties of the same from their general similarity of size and coloring."

Jerdon also mentions two other races of striped squirrels, which may perhaps sometimes be confounded with the common one ; the first, "*Sciurus Layardi, the Travancore striped squirrel*," he thus describes :—

"Much darker than the last, being of a dark dingy olive color with a tinge of ashy ; middle of back, black with a short yellowish streak in the middle and a faint and shorter streak on each side ; tail tipped black, rusty in the middle ; lower parts somewhat ferruginous.

Size of the last or a trifle larger.

This well-marked race is found in the mountains of Travancore and in Ceylon."

And the second,

Sciurus sublineatus, the Neilgherry striped squirrel, "which he procured in the dense woods on the Neilgherries, where how-

ever it is by no means common, also at considerable elevations in Wynaad and Coorg, as follows :—

"Of a dark grizzled olive color, tinged with tawny above, and with three pale lines alternating with four dark ones on the back and croup, the outer dark lines narrower and somewhat less dark than the others ; beneath lighter, more mixed with tawny ; tail grizzled, dusky olive and ferruginous, fur remarkably dense, close and soft."

No. 41, Page 62.—*Small striped Wood-Squirrel.*

My notes on this very pretty little Burmese Wood-squirrel have been lost ; it had seven instead of five stripes and was much lighter in color than the common Indian one, for which, except for its smaller size, it might readily have been mistaken. This specimen was a male, old or fully grown judging from his teeth.

No. 42, Page 63.—*Pteromys petaurista.*
The brown Flying Squirrel.

This beautiful animal is the most gentle and interesting pet of the squirrel family : with Mr. Elliott, I should term the color a "*beautiful gray*" rather than *brown*, it is thus described by Jerdon :—

"Upper parts dusky-maroon black grizzled with white, the membrane and limbs above somewhat brighter and more rufous ; the feet, the muzzle and round the eyes, and terminal half of the tail, dark-brown or black, the last sometimes with a little white towards the tip : under parts dingy brownish-gray, or nearly white. Mr. Elliot calls its upper color a beautiful gray, caused by the intermixture of black with white and dusky hairs. The male is distinguished by an irregular patch of rufous on the sides of the neck, which in the female is a sort of pale fawn.

Length, head and body 20 inches ; tail 21 ; breadth 24.

The female has six mammæ, two pectoral and four ventral.

This flying squirrel is found throughout the peninsula of India, wherever there are extensive lofty forests."

No. 44, Page 64.—*Gerbillus Indicus.*
The Indian Jerboa Rat.

This wonderfully active rat is described by Jerdon as follows :—

"Above light fulvous-brown, or bright fawn color, somewhat

paler on the sides, beneath white ; eyebrow whitish ; whiskers long, black ; tail blackish towards the tip, which is clad with a tuft of long blackish hairs ; ears large, almost nude. The hairs of the back are light pumbrous at the base with fulvous tips, with some thin black hairs intermixed, most conspicuous on the sides and cheeks.

Length, head and body, 7 inches ; tail $8\frac{1}{2}$; ear $\frac{3}{4}$ths. Another measured, head and body 7 inches ; tail $8\frac{1}{10}$th ; ear $\frac{9}{10}$ths ; fore-foot $\frac{4}{10}$ths ; hind foot 2 ; weight $6\frac{3}{4}$ oz.

The jerboa-rat is very abundant in most parts of India, frequenting the bare uncultivated plains and sandy downs, where it forms extensive burrows occasionally near the roots of shrubs or bushes, but very generally in the bare plain."

Nesokia Indica.—The Indian Mole Rat.

This destructive animal is so well known to Indian sportsmen, who constantly come on its well-marked burrows, or the traces where that extraordinary and gipsy-like race, the *Wudders* have been digging it out—that I did not, at first, consider it required a place in these notes—on second thoughts, however, the following extracts from Jerdon are given :—

" Fur long and somewhat harsh, brown mixed with fawn, the short fur softer and dusky ; paler beneath and tinged gray ; the color generally being like that of the common rat, but with more fawn or red intermixed and lighter beneath ; head, short and truncated ; ears small, nearly round, covered with a fine down or small hairs ; tail naked, nearly as long as the body without the head ; whiskers long and full ; incisors orange yellow.

Length, head and body, 7 inches ; tail 6 ; head $1\frac{8}{10}$ths ; ear $\frac{9}{10}$ths ; fore-palm $\frac{4}{10}$ths ; hind palm $1\frac{4}{10}$ths. Another measured, head and body $8\frac{1}{2}$; tail 6 ; hind-foot $1\frac{3}{4}$.

This large field rat is found throughout India, ranging up to a considerable altitude, above 7,000 feet, and also in Ceylon, but is not hitherto recorded from the east of the Bay of Bengal.

The kok abounds in the richly cultivated black plains or cotton

ground, but the heavy rains often inundate their earths, destroy their stores, and force them to seek a new habitation."

Doctor Jerdon says, he found many burrows of this rat in all localities, but especially in pasture and meadow land on the Neilgherries and elsewhere, not unfrequently covering a space nearly 15 to 20 yards in diameter, and covered with huge mounds of the earth thrown out, forming unsightly heaps in a grassy compound, or on a hill side.

No. 47, Page 66.—*Rhizomys.*
Bamboo Rats.

As these extraordinary and exceedingly ugly animals are almost unknown to Indian sportsmen, I extract Jerdon's description of the family:—

"Incisors very large, long, somewhat triangular, sharp, molars $\frac{3-3}{3-3}$, rooted, subcylindric, the crown with somewhat parallel cross ridges; upper molars with a lobe internally; head large; body massive; eyes small; ears naked, conspicuous; feet short, strong; tail short, thick, naked. Chiefly from the Indo-Chinese region and Malayana. One species extends into our north-eastern limits."

No. 48, Page 67.—*Hystrix Leucura.*
Indian Porcupine.

Jerdon gives the following description of this animal.

"Muzzle clad with short stiff bristly hairs, and a few white spines on the face; spines on the throat short, grooved, some with white points forming a demi-collar; crest full, long, chiefly of black bristles, a few of them only with long white points; the larger quills on the back black; many annulated with white at base and middle, and some with white points; the long thin quills mostly white at tip; the quills on the loins mostly all white, the pedunculated quills of the tail yellowish-white; some of the quills of the sides and lumbar regions flat and striated; whiskers long, black, a few tipped white.

Length of one, head and body 32 inches; tail 7.

This porcupine is found over a great part of India, from the

lower ranges of the Himalayas to the extreme south, but does not occur in lower Bengal, where it is replaced by the next one."

No. 49, Page 67.—*Hystrix Bengalensis.*
Bengal Porcupine.

Which he says, is

"Smaller than *leucura;* crest small and thin, the bristles blackish ; body spines much flattened, and strongly groved, terminating in a slight seta ; slender flexible quills much fewer than in *leucura,* white with a narrow black band about the centre ; the thick quills basally white, the rest black, mostly with a white tip ; a distinct white demi-collar ; spines of lumbar region white, as are those of the tail and rattle ; muzzle less hirsute than in *leucura.*

Length of one, head and body 28 inches ; tail 8.

Blyth compared this species with the hill porcupine, which it resembles in its smaller crest, and also in its general characters, but it more resembles *leucura* in the proportion of the large quills and other points. He has quite recently written me from England that he considers the porcupine recently described by Sclater as *H. malabarica,* to be the same as his *bengalensis.* Sclater describes it as having a great general resemblance to *leucura,* but differing in the less bristly snout, and the longer tail, as also in many of the quills being orange-colored in the place of white, especially some of the spines of the back and tail whilst others were black and white as in the common kind. If Mr. Blyth is right in his identification of the two species, the orange color of the quills would appear to be only a local variation, and even this does not appear to be constant : for Mr. Day, who first noticed the orange porcupine, states that in captivity they lose much of their orange color, and its vividness greatly decreases when they are ill. Besides the general points of distinction between *leucura* and *malabrica,* Mr. Sclater points out a few slight peculiarities in the form of the skull of the latter.

The Bengal porcupine is found in lower Bengal, extending into Assam and Arrakan, and also in South Malabar ; if Blyth's identification be correct. Nothing peculiar is recorded of its habits."

No. 50, Page 68.—*Hystrix Longicauda.*
Crestless Porcupine.

This he describes as follows :—

"No crest ; head, neck, fore-half of the body, entire belly and limbs covered with black spinous bristles, 2 to 3 inches long, shortest on the head and limbs ; the large quills of the back and croup vary from 7 to 12 inches long, mostly white with one central black ring ; the tail conico-depressed, with some quills about 5 inches long, and the rattle consisting of 35 to 40 hollow cylinders, some closed, others open. A narrow and vaguely marked white collor.

Length of one, head and body, 24 inches ; tail 4, or with the quills 5½.

This porcupine is found in the central region of Nepal and Sikim, and extends through Burmah into the Malayan peninsula and islands."

No. 51, Page 68.—*Leporidæ.*
"*Common*" *and* "*Black-naped Hares.*"

Jerdon gives the following description of the first of these animals :—

"*Lepus-ruficaudatus—The common Indian Hare.*

General hue rufescent, mixed with blackish on the back and head ; ears brownish anteriorly, white at the base and the tip brown ; neck, breast, flanks and limbs, more or less dark sandy rufescent unmottled ; nape, pale sandy rufescent ; tail, rufous above, white beneath ; upper lips, small eye mark, chin, throat and lower parts, pure white.

Length of one, head and body, 20 inches ; tail with hair 4 ; ear externally nearly 5 ; breadth of ear when expanded 2¾. Weight, rarely exceeds 5 lbs.

This hare is found from the foot of the Himalayas, southward to the Godavery river on the east, and on the west as far south as the Taptee river at all events, perhaps further. It extends from the Punjab to Assam.

And of the black-naped hare which is so well known to our Madras sportsmen, he writes :—

Lepus nigricollis.—The Black-naped Hare.

Upper part grayish rufescent, slightly mottled with black ; large nuchal spot extending to near the shoulders, velvety black ; ears grayish-brown internally; dusky posteriorly; black at the base, and white fringed at the appex ; lower neck yellowish, chin and abdomen white ; tail, grizzled black and yellowish gray above, white beneath.

Length of one, head and body, 19 inches ; tail $2\frac{1}{2}$; ear $4\frac{3}{4}$.

The black-naped hare is found throughout the South of India, extending north to the Godavery river on the east, and on the west coast as high as the Taptee river, and perhaps further, for Adams states it to be found in Sindh and parts of the Punjab, but this much requires confirmation. It is the hare of Ceylon also, and has been introduced into Java and the Mauritius. It is very abundant in many parts of the Madras Presidency, more especially on the east coast and in parts of the Deccan.

Lepus peguensis, Blyth, is found in Upper Burmah, and L. Sinensis in China."

The bell and flame decoy mentioned at page 69, is such detestable poaching that it is better left undescribed.

No. 53, Page 70.—*Wild Ass.*

An excellent sportsman and very close observer, who being a Cavalry officer should be able to give a sound opinion on the matter, assured me, that the voice of the wild horse of the snowy Himalayas is "an unmistakable *neigh, not a bray,*" and that he certainly looked on them as horses. He had seen several of these animals and killed one.

At page 239 of his Mammals, Jerdon appears to have had quite a different opinion on this matter for he writes as follows :—

"The *Kiang* or dzightai of Tibet and Central Asia, *equus hemionus,* Pallas, is met with across the snowy Himalayas in Ladak and other parts, and has frequently been killed by sportsmen. It is much darker in hue than the *ghorkhur,* the upper

parts being of a dull ruddy brown or chesnut rufous hue, approaching to bay, especially on the head, and distinctly darker on the flanks, where it abruptly contrasts with the white of the belly. Cunningham calls it the wild horse and says that it neighs, and does not bray ; and others assert the same, or that the voice of the *kyang* is "as much like neighing as braying." On the other hand, Moorcroft, Colonel Strachey, and many sportsmen say that his cry is more like braying than neighing. The evidence of Colonel Strachey, an accomplished and scientific traveller, is valuable on this point. He says, "my impression as to the voice of the *kyang* is that it is a shrieking bray, not like that of the common ass, but still a real bray and not a neigh." Again, "the *kyang* so far as external aspect is concerned is obviously an ass and not a horse." How any one can call it a wild horse after looking at its tail, I cannot understand, (though Colonel Chesney even calls the *hemippus* the wild horse) ; but I can imagine that its darker color, shorter ears, and large size compared with the ordinary domestic ass, may give this animal, at a distance, something of the aspect of a horse."

Who shall decide this question where the authorities on either side are so good ? Is the shrieking call of a mule, a neigh, or a bray ?

No. 54, Page 71.—*Sus Indicus.*
The Indian Wild Boar.

Jerdon gives the following description of this well known animal, and the grand sport of spearing it the palm over all other Indian sports tiger-shooting not excepted.

"Head longer and more pointed than in the European boar ; the plane of the forehead straight, and not concave ; ears small and pointed ; tail more tufted ; the malar beard well marked.

Length of a tolerably five boar, 5 feet to root of tail which is 1 foot, stands a little over 30 inches high at the shoulder.

The color of the adult, says Mr. Blyth, is brownish-black, scantily covered with black hairs. Besides the black recumbent mane of the occiput and back, and the whiskers and the bristles above and below the eyes, there is a bundle of long black bristles

on the throat, and the hairs of the throat and chest are reversed. The tail is scantily covered with short hairs, and the apex compressed with long lateral bristles like those of the elephant, arranged like the rings of an arrow. The young is more hairy, of a tawny or fulvous color and striped with dark-brown. The hairs of the throat, chest, abdomen and elbows (in the two latter places very long) are black on the basal and white at the apical half."

He has, however, rather under-estimated the size of the wild hog of India.

From the records of the Nagpore hunt of which I am at present a member, I find, that of the last twenty-five boars speared, seventeen measured 31 inches and more, in height at the shoulder; of these seventeen, one was 35½, one 34½, three were 34, and five, 33 and 33½ inches. The largest boar on the books of the present hunt up to this date, (March 1870) measured 36 inches at the shoulder, 76 in length, tail included; 54 in girth, the next in size were 35 and 35½ inches in height.

Of the last twenty-five sows, for here we are sometimes obliged to hunt them, fourteen measured 30 inches, and more, at the shoulder, of these one was 33, these are also, but not included in the above list, two sows of 32 and two of 31 inches each. The hunt rule for measuring pigs is from withers to heel (not toe) much in the way a horse is measured, and the same sort of standard is used with very few exceptions, such as when a pig is killed too late in the evening, or too far from the tents to be worth bringing in; the height is then taken on a couple of spear shafts which are afterwards measured.

The following are the dimensions of a boar speared at Seroor, in the Wurdah district, on the 12th of March 70.

Height, 34½ inches; length, taken in profile from nose to root of tail, 5 feet and half an inch, and along the back, 8 feet 2 inches, length of tail not including long bristles at end, 11½ inches, girth, 4 feet 6 inches, tusks 7¾ inches.

Jerdon does not over-estimate the speed and courage of a wild hog: no one can form a correct idea of the former who has not

tried to spear one on rocky ground where he has not become too fat to gallop. In further proof of the savage courage of a boar, I may mention the following instance which is recorded in the hunt annals of the 25th of December 69. A large *unwounded* boar had succeeded in getting into some thick bushes; on being bullied by a terrier he charged the nearest hunter and ripped the horse very badly, two other sportsmen who were not riding then tried to tempt the boar to charge, one by firing No. 10, or quail-shot, into the bush the other by riding a camel into it. The last was successful for "charging straight at the camel's legs (receiving some shot in his face on his way) he completely routed the whole arrangement, knocked over and ripped the camel, which broke its leg in falling, and then made away across the fields;" he was followed and twice speared, but he was as cunning as courageous and managed to give his pursuers the slip in some long grass and thick bushes. This boar's savage charge at the camel was within a few yards of all of us, for every one was trying to incite him to come forth: after his headlong rush out of the bush he reared so upright in his attempt to reach his clumsy disturber, which was quite frantic from deadly fear, that he succeeded in ripping it in, what in a horse would be termed, the stifle joint. The poor brute rolled over in its agony, smashed one of its legs in the fall and was of course shot. Luckily the rider, one of the best known among the Nagpore hunt, was not hurt.

Anglo-Indians are often justly accused (we Madrasees are less guilty than those from our sister Presidencies) of the crime of interlarding our language with terms sporting, judicial, financial or mercantile, as the case may be, extracted from the various unknown tongues of the districts in which we are quartered. Among others the word "*Sounder*," as a base substitute for some British term, has been laid to the discredit of pig-stickers. Let me in defence of many a dear comrade of "*Saddle, Spur and Spear*," give the following extract from Bailey's English Dictionary which, as the 15th Edition was published in 1753, should be an authority old enough to satisfy most men.

"*Sound* } *[among Hunters] a Herd,*
Sounder } *or Company of Swine.*"

No. 57, Page 82.—*Rucervus Duvaucelli.*
Swamp or Bara Singha Deer of Central India.

Jerdon's remark that this deer is to be found in the highlands of the northern districts of the Madras Presidency, and the Ganjam and Vizagapatam Collectorates, is confirmed at page 90, the horns there referred to have been made over to the Madras Museum.

Jerdon thus describes this deer and calls it the "*Swamp Deer* of many Europeans, generally *Bara singha* of sportsmen in Bengal, Oude, &c.

"Horns very large and moderately stout, curving well outwards; pale, with basal antler, and a more or less branched summit, the lower branches sometimes simulating a median tine. Form altogether lighter than that of the sambur, especially the neck and fore-quarter; hair finer and more woolly; tail moderately short. Color dull yellowish-brown in winter, bright rufous-brown or chesnut in summer, paler below and inside the limbs; white under the tail. The female is lighter, of a pale dun or whity-brown color. The young are spotted.

Length, nearly 6 feet; tail 8 to 9 inches; height 11 hands to 11½ (44 to 46 inches). Average length of horns 3 feet, or a little more. Fourteen and fifteen points are not uncommon in old stags, and I have seen them with seventeen.

This fine deer is found in the forest land at the foot of the Himalayas, from the Kyarda Doon to Bhotan, and is very abundant in Assam, inhabiting the islands and churrs of the Berhampooter, extending down the river in suitable spots to the eastern Sunderbunds. It is also stated to occur near Monghyr, and thence extends sparingly through the great forest tract of Central India. It is rare to the south of the Nerbudda, but it has to my knowledge been killed between the Nerbudda and Nagpore, not far from Seonee, and it is tolerably abundant in the open forest land between Mundlah and Omerkuntak at the source of the Nerbudda. To the east of this forest tract it has been killed near Midnapore, and in the highlands of Goomsoor; but does not, as far as is known, extend so far west as the road between Mirzapore and Jubbulpore."

No. 58, Page 83.—*Rusa Aristotelis.*
The great rusa, Sambur.

This grand stag is too well known to require any description from me.

Since the notes at page 84 were written, my experience on the Neilgherry Hills leads me to agree with HAWKEYE that the flesh of the sambur, if kept sufficiently long, is excellent.

Unless one has been on the happy hunting grounds, he writes of at page 92, it is impossible to appreciate his minute and thoroughly correct description ; let me however corroborate it. Mymost difficult stalking has been to avoid, not to kill, the " *fag,*" or the hinds mentioned at pages 96 and 100 : on one occasion I had to spend a most interesting but uncomfortable hour while a hind and calf snugly reposed in a warm sheltered nook within 50 yards of my bitterly cold position. They had evidently been alarmed by some forest foe, probably a tiger or wild dog, but were luckily looking in the opposite direction when I turned the angle of a hill close to them. The wind was in my favor, but they completely barred my movements, for if they had been startled they would have spread the alarming tidings through their relations. Dropping on the ground, I had only to watch and wait : after some time the young one, easily satisfied, laid down, but his more wary mother continued to stand and gaze long and anxiously at the opposite hill-side, and even when she did at last follow his example, her eyes and ears were kept so keenly on the alert that I dared not move, and, while watching her, had the bitter disappointment of seeing a very handsome stag returning to his lair in the wood through the very gorge she thus cut me off from. Although foreign to the subject, one of those strikingly interesting pictures by nature which few but sportsmen can ever witness, may be here mentioned. While lazily watching the hind and calf through my glass, there were besides these deer at one time in the field of the instrument three or four of the handsome grey jungle fowl of Southern India, " *Gallus Sonneratii*" and one of the fine Neilgherry black monkeys or " *langurs,*" page 167. All when taken with the magnificent hill scenery and brilliantly tinted woodlands of the Neilgherries com-

bining to make as good a subject for brush or pencil as any artist need wish for.

I returned in the evening and had the satisfaction of seeing the stag stealing, with all the precautions told by HAWKEYE, out of the opposite side of the wood he entered in the morning. By taking due advantage of the wind however and stalking with more than ordinary patience, I managed to put a deadly bullet through his brawny and well-maned neck which was only the part exposed as he stood, among brushwood, long grass and rocks, sniffing the breeze and listening to the distant shouting of some herdsmen in the glen far beneath us.

In opposition to the remarks at page 108, the following extract from a letter by a far better sportsman in general and deer-stalker in particular than the author of these notes and one often quoted in them is given :—

" I don't agree with you when you state that the stag " roars" and the hind " lows ; " you cannot call that deep bark of a sambur stag a " roar," on the *sharper* one of the hind a " low," much less " a faint grunting low."

It is always difficult to describe sound by words ; but in defence of the word below, I can only bring forward HAWKEYE at page 86, some of our old writers, and last not least, Scott, who says vide " Marmion," Canto IV, verse xv.

" The wild buck *bells* from ferny brake."

No. 59, Page 109.—*Axis Maculatus.*
Spotted Deer.

This beautiful deer is too well known to require any description from me.

I do not think that there are two species of spotted deer, but, as far as my experience goes, the horns of those from the south of the Madras Presidency are more inclined to spread into extra times and to be irregular in shape than those from the Northern Circars, the Deccan or Central India—although in these districts the deer seem larger. The difference in size may be caused as the writer tries to explain at page 109. That in horn may perhaps be

accounted for by the greater number of specimens obtained ; for there are many more spotted deer to be found in the forests of the south than in those north of the Kistnah river.

It is doubtful how high spotted deer ascend above the level of the sea : "Smooth Bore," a well known naturalist, whose name however I do not feel at liberty to give, mentions in a letter, dated 8th February 1870, to the *South of India Observer*, so often mentioned in these notes, that, he has "heard of a spotted deer being "killed on the Neliamputty Hills (a spur of the Annamallays) at "about 4,000 feet elevation."

While writing of spotted deer no excuse need be made for entering the following life-like bit of word-painting by my friend HAWKEYE.

THE SPOTTED DEER.

"I don't know why it is, or how it is, but so it is, that, somehow there is a greater charm in the pursuit of the abovementioned beautiful animal than of any other of the denizens of the bonnie brown forest or tangled jungle where it loves to dwell. I am not alone in this feeling ; many sportsmen, and some who have slain the mighty Behemoth, Taurus the bull, and even the feline king of the forest, recall with pleasure the sport they have enjoyed after this less noble and timid creature : whether it be coupled with the indescribable feeling that rejoices the sportsman's heart as he stealthily wanders beneath the arcades of the feathery bamboo jungle, forming as they do aisles and glades, and vistas of nature's lovely handiwork so enchanting to the sportsman's eye, making, as it were, his very inmost soul to rejoice and be glad : or, whatever the facination may be, whether of scenery or the spirit of sport itself, it exists ; and none that I have met, mighty hunters though they be, have ever been ashamed to own the soft impeachment. What then is the attraction that has so often led me and others to follow with such keenness and ardour the chase of the "Dappled Darlings ?" Handsome and beautiful as the buck Axis really is, he cannot be compared to that noble stag, the Sambur ; glossy and bright though his spotted hide may be, he is wanting in that stamp of nobility the latter so truly possesses. A long and somewhat heavily built carcass, supported by short stout legs, taking him as

he creeps ignobly through the brushwood, stealthily avoiding some suspected danger, his appearance is then mean to a degree, though he is only acting as instinct guides him ; but there is another side to the picture, affording a complete contrast. Imagine a forest glade, the graceful bamboo arching overhead, forming a lovely vista, with here and there bright spots and deep shadows—the effect of the sun's rays struggling to penetrate the leafy roof of nature's aisle—deep in the solitude of the woods see now the dappled herd, and watch the handsome buck as he roams here and there in the midst of his harem, or, browsing amongst the bushes, exhibits his graceful antlers to the lurking foe, who, by patient woodcraft, has succeeded in approaching his unsuspecting victim : observe how proudly he holds himself, as some other buck, of less pretensions, dares to approach the ladies of the group ; see how he advances, as on tip-toe, all the hair of his body standing on end, and with a thundering rush drives headlong away this bold intruder, and then comes swaggering back ! but, hark !—a twig has broken ! suddenly the buck wheels round, facing the quarter from whence the sound proceeded : look at him now, and say, is he not a quarry well worth the hunter's notice ? With head erect, antlers thrown back, his white throat exposed, his tail raised, his whole body gathered together, prepared to bound away into the deep forest in the twinkling of an eye, he stands a splendid specimen of the cervine tribe. We will not kill him ; we look and admire ! A doe suddenly gives that *imperceptible signal* to which I have formerly alluded, and the next moment the whole herd has dashed through the bamboo alleys, vanishing from sight,—a dappled hide now and again gleaming in the sunlight as its owner scampers away to more distant haunts."

No. 69, Page 112.—*Axis Porcinus.*
The Hog Deer.

So many of our Madras sportsmen now visit Burmah that to most military men this animal does not require any description, but as some of us will insist upon applying the name "*hog deer*" to the tiny "*memimna Indica*" or *mouse deer*, page 121 of these notes and 269 of Jerdon, I extract as follows :—

" General color a light chesnut or olive-brown, with an eye-spot,

the margin of the lips, the tail beneath, limbs within, and abdomen white. In summer many assume a paler and more yellow tint, and get a few white spots ; and the old buck assumes a dark slaty color. The horns resemble those of a young spotted deer, with both the basal and upper tines very small, the former pointing directly upwards at a very acute angle, and the latter directed backwards and inwards, nearly at a right angle, occasionally pointing downwards.

Average length of a full-grown buck from 42 to 44 inches, from muzzle to root of tail ; tail 8 ; height at shoulder 27 to 28 inches. Average length of horns 15 to 16 inches.

The hog deer is found throughout the Gangetic valley in suitable spots, extending to the foot of the hills, and more rarely in Central India. It is also found in the Punjab and Sindh, and is abundant in Assam, Sylhet and Burmah. It runs with its head low and in a somewhat ungainly manner, hence its popular appellation in India of hog deer.

The young are beautifully spotted."

No. 61, Page 115.—*Cervulus Aureus or Muntjac. Rib-faced or Barking Deer.*

The following extract from the "*Polar World,*" by Doctor G. Hartwig, mentions that the rein deer makes a somewhat similar noise to that mentioned at page 116 :—

"When the rein deer walks or merely moves, a remarkable clattering sound is heard to some distance, about the cause of which naturalists and travellers by no means agree. Most probably it results from the great length of the two digits of the cloven hoof, which when the animal sets foot upon the ground separate widely, and when it again raises its hoof, suddenly clap against each other."

The tiny feet of the muntjac can hardly cause the noise. As suggested at page 121 of these notes, it may proceed from the long tongue and movable canine teeth being smacked together, but, as the tusk cannot reach any other tooth, Colonel Hamilton has requested me to take out that portion of my remark at page 116, which causes him to suggest that this extraordinary noise

may be caused by the long canine teeth. He killed last year near Ootacamund a muntjac which had a complete *soft* and a complete *hard* horn. The testis had probably been injured on the side on which the horn had not been cast.

No. 62, Page 121.—*Memimna Indica.*
The Mouse Deer.

Jerdon's description of this curious little animal is as follows :—

"Above olivaceous mixed with yellow grey ; white below ; sides of the body with yellowish white lines formed of interrupted spots, the upper rows of which are joined to those of the opposite side by some transverse spots ; ears reddish-brown.

Length of body about 22 to 23 inches ; tail 1½ ; height 10 to 12 inches ; weight 5 to 6 lbs.

The color of this mouse deer varies somewhat in different localities.

The Indian mouse-deer is found in all the large forests of India from the extreme south to the foot of the Himalayas, but it does not occur at any great elevation, and I have rarely seen it from higher altitude than about 2,000 feet. It is much more abundant in the South of India than towards the north, and is certainly rare in the Himalayan Terai."

No. 67, Page 134.—*Antilope Bezoartica.*
Indian Antelope.

At page 276 of his book, Jerdon remarks that he has seen several pairs of black buck horns, 26 inches long, and heard of others 27, and, that, one pair mentioned by Mr. Elliot were 24 inches long with five flexures and fifty rings. I do not understand how these flexures should be counted, or rather where one is supposed to end and the next to commence, but, since my notes on the Indian antelope were written, I have (Bombay, 20th March 1869), seen in the possession of the Honorable Barrow Ellis, a pair of black buck horns in length and number of rings, although not in number of flexures exceeding those mentioned by Messrs. Elliot and Jerdon.

This buck was shot in Goozerat, on the western side of the gulf of Cambay, his horns fairly measured, and when off the skull, were 26½ inches long, with fifty-two rings; but with only three and a half flexures or twists.

Jerdon is as usual correct, when he says that greyhounds get savage over an antelope that has been pulled down. A short time ago one of my dogs, although perfectly gentle at other times and submissive to reason during the worry of jackal or fox, got so excited over a wounded gazelle they had run into that she flew at my face and, had not my stick upset her, would probably have left on it a lasting mark of that morning's sport.

No. 68, Page 141.—*Gazella Bennettii.* *The Indian Gazelle.*

The longest horns which I have seen of this gazelle were, of a buck a little more than 13 inches, and of a doe just 6. The skull to which these last belonged is intended for the Madras Museum. This doe was killed by my greyhounds close to Kamptee: with the exception of an old scar on one leg, she appeared in excellent health and condition, and the ground was not in favor of the dogs, she should therefore not have been run into. This beautiful antelope is very easily tamed, but like other wild animals in captivity the males become savage during the rutting season. A very handsome buck, now in my possession and intended for the People's Park at Madras, if his exceeding impudence to dogs and men does not bring him to an untimely end, requires to be handled with great caution, for he makes use of his dirk-like horns with, or without, any provocation.

Jerdon's description is as follows:—

"Color above deep fawn-brown, darker where it joins the white on the sides and buttocks; chin, breast, lower parts and buttocks behind white; tail, knee tufts and fetlocks behind black; a dark-brown spot on the nose, and a dark line from the eyes to the mouth, bordered by a light one above.

Length of a buck 3½ feet; tail 8½ inches; height 26 at shoulder, 28 at the croup; ear 6 inches; head 9; horns 12 to 13.

The horns vary much in thickness and lyration. I have seen several 14 inches long with 23 rings ; but Adams states that he has seen them in the Punjab 18 inches ;* as a rule, very few exceed 14 inches, and most are below this. The tip sometimes curves much forward. The horns of the female are small, rarely longer than 6 inches, usually 4 to 5, slender, slightly wrinkled at the base, inclining backwards with the tip bent forwards.

The Indian gazelle is found throughout India in suitable localities, unknown in lower Bengal and the Malabar Coast, and most abundant in the desert parts of Rajpootana, Hurriana and Sindh. It is never found in forest country, nor in districts having a damp climate, but is often met with in low thorny jungle. As a rule, however, it prefers the open bare plains, or low rocky hills or sandhills ; and a barren country to a richly cultivated one."

No. 71, Page 157.—*Bos gaurus.*
The Gaur, Bison of Madras Sportsmen.

The following extract of a letter from a medical friend, himself an excellent sportsman, gives an interesting illustration of the fury and strength of these magnificent animals when engaged in battle. This grand forest joust must have been a scene which any sportsmen or naturalist would have gone far to witness. The bison in question was shot in Central India :—

My dear Colonel,

As to the bison story. R. shot a large bull, and on examining the head found in it about midway between the eyes and horns, a little to the left of the mesial line, a fragment of another horn, the tip for about an inch and a half was solid, but it shaded off towards the base into a long thin strip, and on the inside was cup-shaped, the length of the fragment was about 5 or 6 inches as well as my memory serves me. The frontal plate of the head was perforated, the hole large enough to admit the point of my fore-finger, whether the brain was wounded or not it is hard to say, but R. said the entire fragment was embedded in, or surrounded by fatty matter ;

* Jerdon thinks that there must be some mistake in this, either that the measurement is wrong, or that a different species is meant.—Vagrant.

on looking into the skull through the occipital foramen the orifice resembled that made by a bullet; at first I thought it was such, and as a friend had assured me a few days before, that the bison's forehead was bullet proof, an assertion which I received *cum grano salis* I felt inclined to chuckle, until put right by R. as to the cause of the injury; he said he prized the specimen more than anything else he had.

No. 73, Page 162.—*Manis.*
Pangolin or Scaly Ant-eater.

With the following descriptions by Jerdon of Manis pentadactyla the "*Indian scaly ant-eater,*" and Manis aurita, the *Sikim scaly ant-eater;*" these very imperfect notes come to an end. Of the first he writes:—

Tail shorter than the body, very broad at the base, with 16 or 17 scales in each longitudinal line; 16 scales on the dorsal series in 10 or 11 rows; middle nail of the four feet much stronger than the others, scales thick, striated at the base, pale yellowish brown or horny clay color; the lower side of the head, body and feet nude, brownish white; nose fleshy; soles of the hind-feet blackish; auricles indistinct.

Length of one, head and body 26 inches; tail 18. A female measuring 40 inches weighed 21 lbs.

The common Pangolin or Scaly Ant-eater is found throughout the whole of India, most common perhaps in somewhat hilly districts, but nowhere abundant. It appears to extend into the lower Himalayas, for both this and the next species were found by Hodgson in Nepal. It is strictly nocturnal, and feeds almost exclusively on ants, especially the white ants (termites). Its gait in walking is very peculiar, the back arched, the fore-feet with their anterior surface bent over and brought into contact with the ground, on which it progresses very slowly."

And of the second,

"Tail a little shorter than head and body, not quite so thick at the base as the last, with 5 rows of scales about 20 in number in each row; 15 to 17 rows of scales in a line on the back, most of them

with a few whitish hairs or bristles beneath them, especially in young individuals. Muzzle very acute ; ears conspicuous, large ; all the anterior claws large, especially the middle one, and the next outer ; posterior claws small. There is a less marked difference in the size of the scales of the head and neck and body than in pentadactyla, in which the scales of the head are very much smaller.

Length of one, head and body 19 inches ; tail 15¼.

This manis appears to be the only species in Sikim, and thence extends through the Indo-Chinese countries to China itself."

APPENDIX.

JERDON, No. 83.—*Crossopus Himalaicus.*
Himalayan Water Shrew.

Is this or any other water shrew to be found in Central India?

While the Nagpore hunt were beating for hog a long covert of date bushes and grass ("*sind-bund*" of Indian hunters) that runs near Pipulgaum and Suroor, about six miles west of Hingunghat in the Wurda district, I distinctly saw a very dark-brown, or black, shrew playing and swimming in the water, not more than a few inches deep, of a sluggish stream near which we were posted. The little animal was within spear's length of me for some time; but, as any attempt to capture it would have disturbed the proceedings, was not molested.

Jerdon gives the following description of the Himalayan Water Shrew which he procured at Darjeeling, from the little Rungeet river.

"Fur, dark-brown, or blackish above, somewhat paler beneath, and rusty-brown on the lower part of the throat and the middle of the belly; fur rather long, with scattered long white-tipped hairs; a few on the sides, many on the rump and round the root of the tail; ears very small, hairy, concealed; tail long, slender, with a brush of hairs at the tip, and ciliated with rigid whitish hairs beneath; feet distinctly ciliated; claws very short; whiskers elongate, brown.

Length, head and body 5 inches; tail $3\frac{1}{4}$; hind foot nearly $\frac{3}{4}$ths. Another measured 6 inches; tail $3\frac{1}{2}$; hind foot $\frac{1}{12}$ths."

Some sportsmen in the Nagpore country may perhaps be able to obtain a specimen of the animal seen near Suroor.

JERDON, No. 129.—*Herpestes Monticalus.*
The long-tailed Mungoos.

This fine mungoos was not noticed in its proper place as I had not seen it when my notes on the ichneumons were sent to the press.

Jerdon's description is as follows:—"Colors much as in "*griseus*," but somewhat more yellow in its general tone; tail longer, tipped with maroune and black, and more hairy; feet dark reddish brown, muzzle not dark, slightly tinged with reddish. Larger than "*griseus*." Tail nearly equal in length to the head and body. Length of one 20 inches; tail with hair 19." He only procured this mungoos from the Eastern Ghats inland from Nellore, where it inhabits forests among the hills. In exactly this sort of ground, just outside the famous hill fort of Gawilghur (vide

Wellington's Despatches) near the little sanitarium of Chiculda these mungooses are to be found. Length of a young male, killed by a greyhound with me, was 16½ inches, tail with hair nearly 18, rather longer in proportion than Jerdon's. His parents, fully the size given by Jerdon, escaped. They were decidedly more hairy than any mungoos of the plains. The feet were more brown than red in my specimen—muzzle, face and inside of the ears reddish.

No. 28, Page 41.—*Striped Hyæna.*

Since these notes went to press, the remark that a hyæna gives a long run before he is speared, not from speed but from the way the brute turns, has been corroborated by an instance in which a hyæna after having been reached and stuck within the first few fields gave us a gallop of fully three miles over very bad ground and under a mid-day sun before he was killed.

Page 114, printed at the "BLUE BELL," and at the "RING."

The writer of these notes has owned, vide page 10, that he reads more for pleasure than profit ; some one may like him care to know that in the entertaining "*History of Sign Boards from the earliest times to the present day*," published in 1866 by "*John Camden Hotton*," these signs are thus noticed:

"At the *Bell*, in the Poultry, lived, in the reign of King William and Queen Anne, Nathaniel Crouch, the famous bookseller, who was the first to condense great and learned works into a small and popular form. He generally wrote under the name of "John Burton." His "*Historical Rarities in London and Westminster*, was one of the books Dr. Johnson, in his old age, desired to read again in remembrance of the days of his youth."

"The *Ring* was the sign of one of the booksellers in Little Britain, in the reign of Queen Anne, and the *Golden Ring* was, in 1723, the sign of G. Coniers on Ludgate Hill, who published a black letter edition of the "*Merry Tales of the Mad Men of Gotam.*" An old tradition that Guttenberg received the first idea of printing from the seal of his ring impressed in wax, may have led those booksellers to adopt that object for their sign."

It is to be hoped that in 1870 printers cannot be found to prepare, nor booksellers to publish such an unblushing guide to poaching as that by J. S. It may be as well to mention "*Gotham.*" Old N. Bailey, in his wonderful Dictionary, (why is it so little known ?) thus writes of it :

"AS WISE AS A MAN OF GOTHAM."

"This proverb passes for the Periphrasis of a Fool, as a hundred Fopperies are feigned and fathered on the Townsfolk of *Gotham*, a Village in *Nottinghamshire.*"

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